

Trinitron® Color Video TV

Operating Instructions

Before operating your VIDEO TV, please read this manual thoroughly and retain it for future reference.

KV-13VM30/31
KV-20VM30

VHS

VCR *plus*

Owner's Record

The model and serial numbers are located at the rear of the VIDEO TV. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____

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Contents

Preface

This section tells you about special features, safety information, and preparatory information for using this manual.

Chapter 1: Setting UP

This section shows you the steps necessary for installing and presetting your VIDEO TV, and how to connect optional video and audio equipment.

Chapter 2: Using Basic VIDEO TV Features

This section gives you basic information about operating and adjusting your VIDEO TV.

Chapter 3: Using Advanced TV Features

This section shows you the steps for other useful TV features with using the On-Screen Menus.

Chapter 4: Using Basic VCR Features

This section gives you basic information about operating and adjusting your VCR.

Chapter 5: Using advanced VCR Features

This section shows you the steps for other useful VCR features with using the On-Screen Menus.

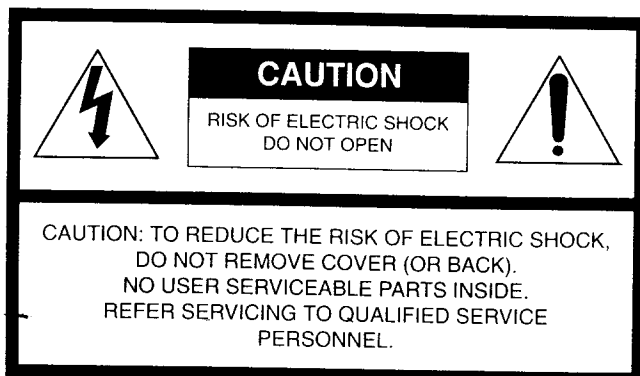
Appendix

This section gives you specifications and troubleshooting information.

- For a detailed table of contents, see p. 3.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

CAUTION:

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

When using TV games, computers, and similar products with your VIDEO TV, keep the brightness and contrast functions at low settings. If a fixed (non-moving) pattern is left on the screen for long periods of time at a high brightness or contrast setting, the image can be permanently imprinted onto the screen. These types of imprints are not covered by your warranty because they are the result of misuse.

Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

Use of this VIDEO TV receiver for other private viewing of programs broadcast on VHF or UHF or transmitted by cable companies for the use of the general public may require authorization from the broadcaster/cable company and/or program owner.

Do not use this VIDEO TV if moisture has condensed, such as on its CRT, otherwise it may cause malfunction. In this case, leave the VIDEO TV unused until it gets dry.

Precautions

Safety

- Operate the VIDEO TV only on 120V AC.
- One blade of the plug is wider than the other for safety purposes and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Should any liquid or solid object fall into the cabinet, unplug the VIDEO TV and have it checked by qualified personnel before operating it any further.
- Unplug the VIDEO TV from the wall outlet if you are not to going to use it for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

Installing

- To prevent internal heat build-up, do not block the ventilation openings.
- Do not install the VIDEO TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.

Cleaning

Clean the VIDEO TV with a soft dry cloth. Never use strong solvents such as thinner or benzene, which might damage the finish of the cabinet.

Repacking

Keep the original carton and packing materials to use for safe transport of your VIDEO TV in the future.

If you have any questions or problems concerning your VIDEO TV, please contact your nearest Sony dealer.

This VIDEO TV receiver provides display of television closed captioning in accordance with 15.119 of the FCC rules.

Information

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

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Introducing the Sony Trinitron® Color VIDEO TV

About the manual

- We highly recommend that you read this manual before using your VIDEO TV combined Television and VCR. Keep the manual handy for future reference.
- The instruction in this manual are for the KV-20VM30 and KV-13VM30/31. The KV-20VM30 is used for illustration purposes.

Features

With the following features, you can:

- Watch up to 125 cable channels for a total of 181 possible off-air and cable channels with the **multi-band VHF/UHF/CATV tuner**.
- Enjoy 4 head high quality picture and variable speed playback.
- Set and adjusts the time automatically by using Auto Clock™ set features.
- Quickly and easily preset the VCR to record programs by using VCR plus+* system.
- Call up on-screen menus to set timer-activated functions (Auto clock set, Manual clock set, On/Off Timer, Channel Block set), Cable on/off, AUTO Program, CH Erase/Add, Tape remain, Auto Repeat On/Off by using the **SET UP** feature.
- View the closed caption and the text by using **Caption Vision**.
- Enjoy automatic Playback by automatically playing, a cassette tape that has had its erase-protection tab removed.
- Record programs without using the program recording timer while you are away, by using the **QUICK TIMER**.
- Monitor quickly other Video/Audio sources (such as a camcorder, a video game, etc), by using the **PLAY ON™**.

* VCR plus+ and plus code are trademarks of Gemstar Development Corporation. VCR Plus+ system is manufactured under license from Gemstar Development Corporation.

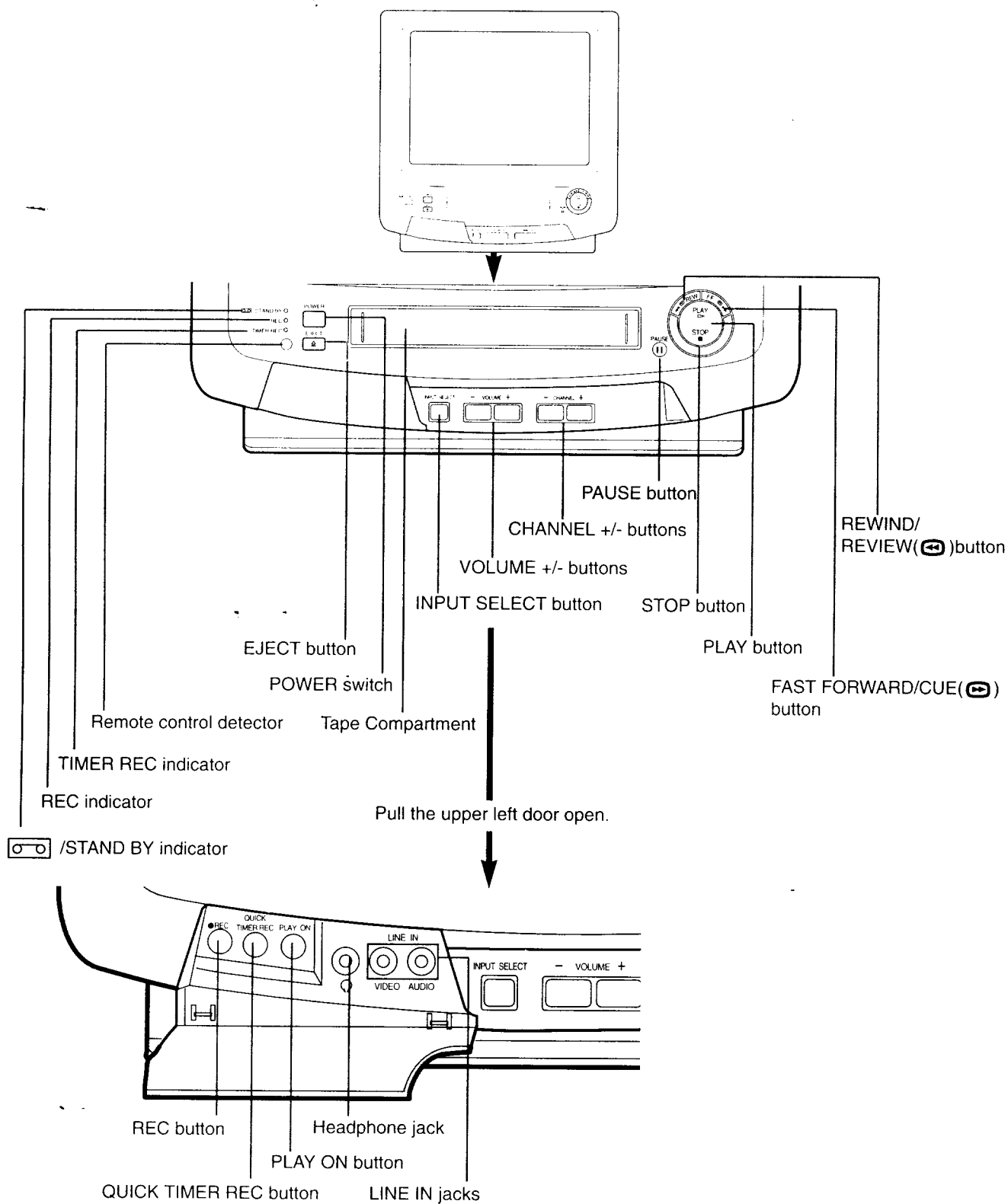
With the supplied Remote Commander, you can:

- Use the **CHANNEL BLOCK** feature, with which picture is blocked and sound is muted, to prevent children from watching unsuitable programs.
- Switch quickly between two channels by using **JUMP**.
- Set the TV to automatically shut off after 30, 60, and 90 minutes by using the **SLEEP** timer.
- Program the VCR to make up easily to six unattended recordings within a 1-month period, including daily and weekly recordings, by using **TIMER ON-SCREEN**.
- View a slow motion during playing back, by pressing **-SLOW+**.
- View a picture frame by frame during PAUSE/STILL picture, by pressing **FRAME**.
- Playback pictures in twice speeds by pressing **X2**.
- View a single frame by using **PAUSE**.
- Make sections of tape so you can quickly and easily return to the section you want to watch, by using **INDEX** and **MARK**.

Locating the Controls



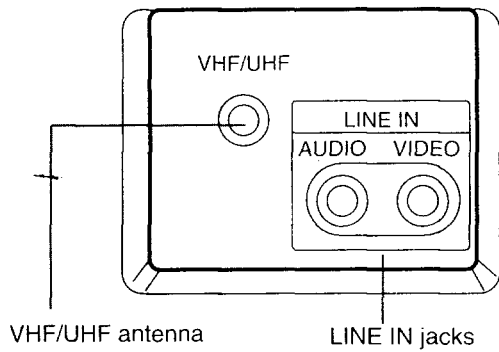
Front Panel



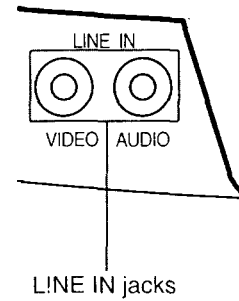
Locating the Controls

Rear and Front Panel

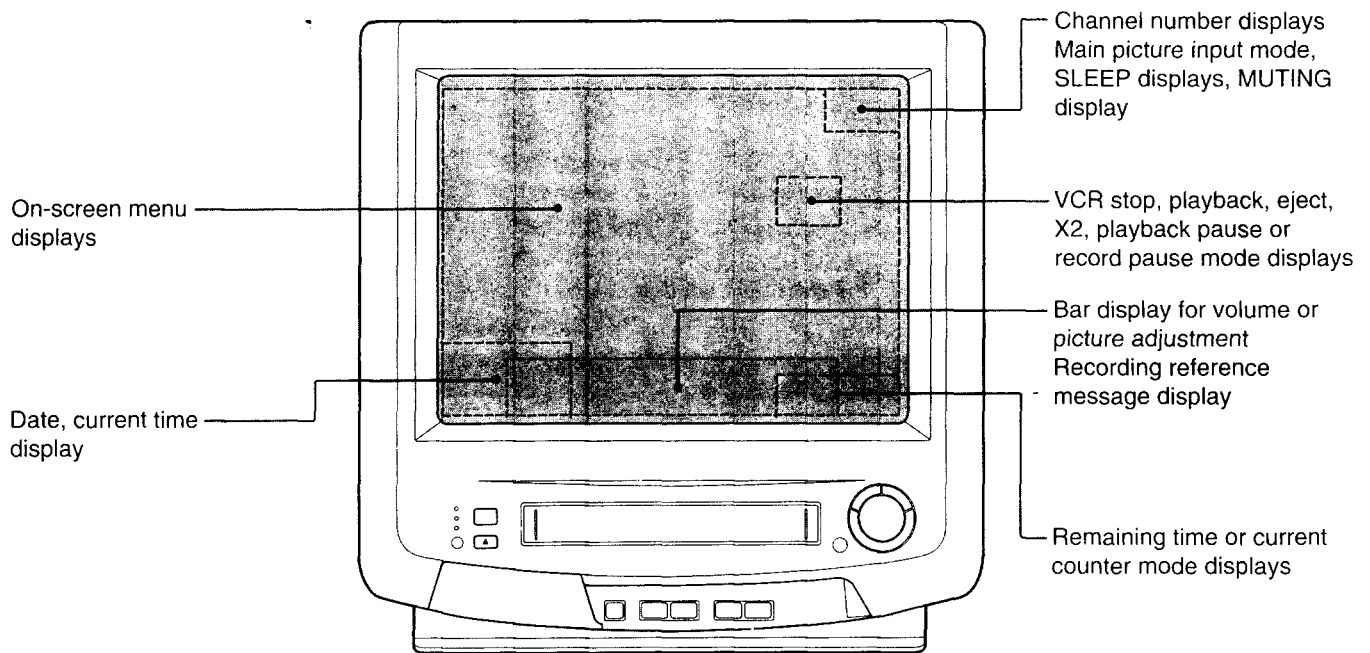
● Rear Panel



● Front Door Inside

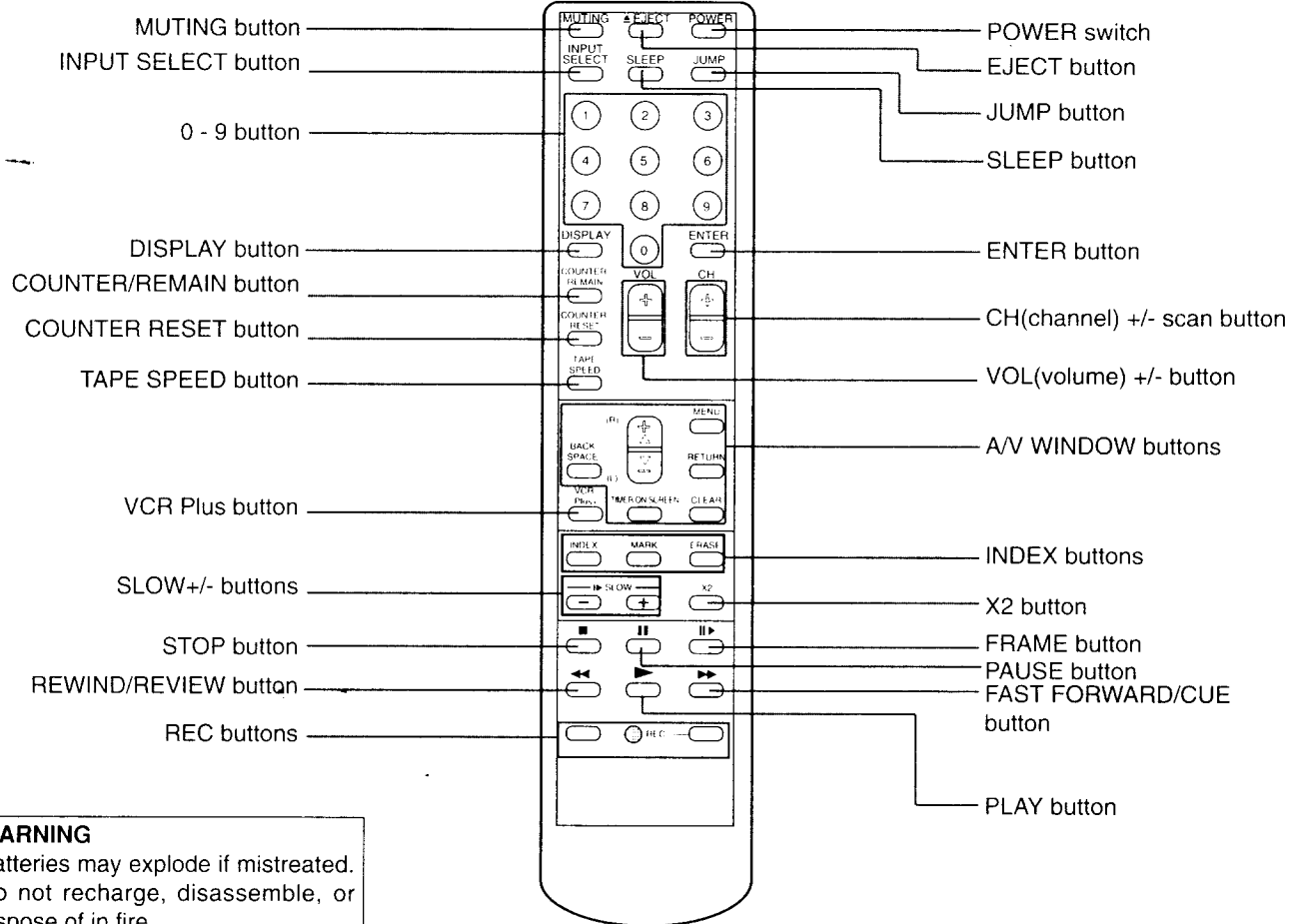


Screen Displays



Remote Commander

RM-Y138/W

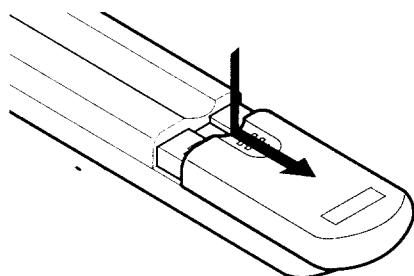


WARNING

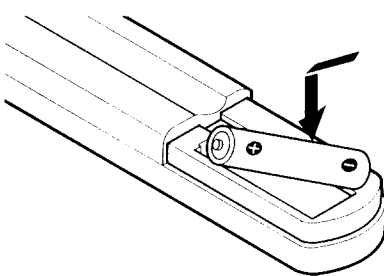
Batteries may explode if mistreated. Do not recharge, disassemble, or dispose of in fire.

Instalilling Battery

- 1 Remove the battery compartment cover (Rear of commander).



- 2 Insert one AA Battery (R6) being careful of the correct polarity.



Battery life

Under normal operation, the battery will last up to a half of year. If the Remote Commander does not operate properly, the battery might be exhausted. Replace it with new one.

To avoid damage from possible battery leakage

Remove the battery if you do not plan to use the Remote Commander for a fairly long time.

Connecting TV Antenna/Cable

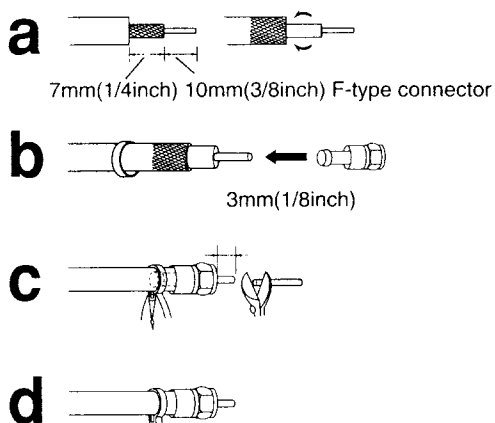
Although you can use either an indoor or outdoor antenna with the VIDEO TV, an outdoor antenna will provide you with better picture quality. You can receive cable TV by connecting a cable supplied by your local cable company.

Connecting VHF, UHF or VHF/UHF Combination Antenna, or CATV Cable

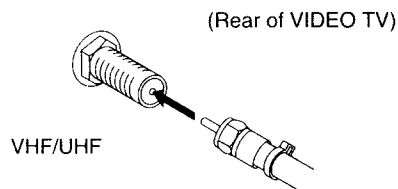
75-ohm coaxial cable (round)

- 1 Check your antenna cable type and prepare the end of the cable using the F-type connector.

Attach an F-type connector (not supplied).



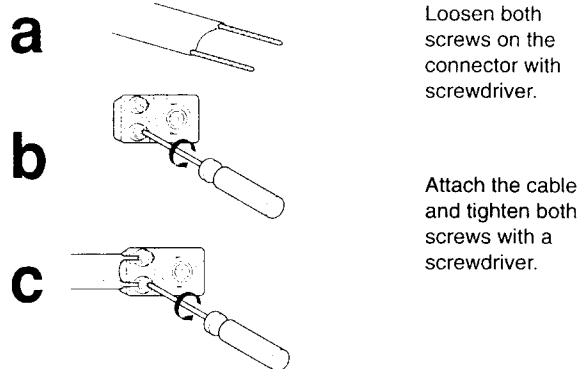
- 2 Plug the connector into the VHF/UHF terminal at the rear of the VIDEO TV.



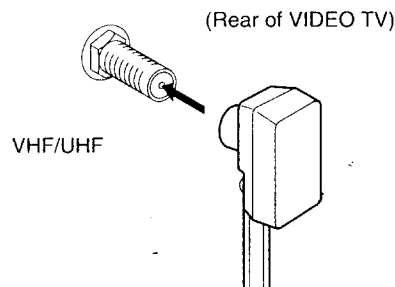
300-ohm twin-lead cable (flat)

- 1 Check your antenna cable type and prepare the end of the cable using the 300-ohm twin-lead cable.

Attach the supplied antenna connector.



- 2 Plug the connector into the VHF/UHF terminal at the rear of the VIDEO TV.

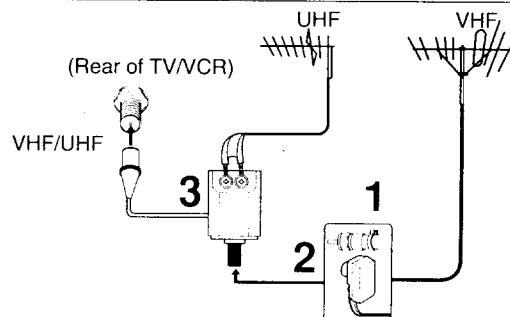


* Most combination antennas are equipped with a signal splitter. Remove the splitter and attach the appropriate connector.

Connecting Both VHF and UHF Antennas

Use the EAC-66 U/V mixer (not supplied).

- 1** Prepare the VHF antenna end using the appropriate connector (p. 8).
- 2** Connect the cables to the mixer.
- 3** Attach the mixer to the VHF/UHF terminal.



When the U/V mixer is used

Snow and noise may appear in the pictures when viewing cable TV channels over 37 ($W + 1$).

Note

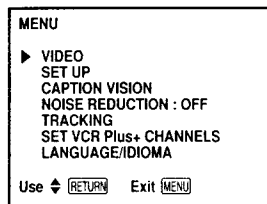
For better picture quality, we would recommend you to connect an outdoor antenna.

Using the On-Screen Menus

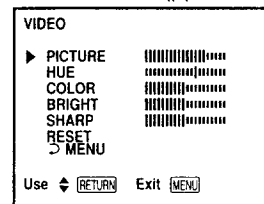
The following flow chart shows the different levels of on-screen menus that you can use to make various adjustments and settings. See the indicated pages for instructions on using each feature.

For picture quality adjustment

Main menu

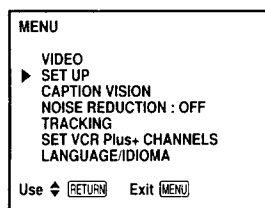


VIDEO menu (pp. 21-22)

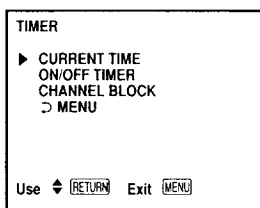
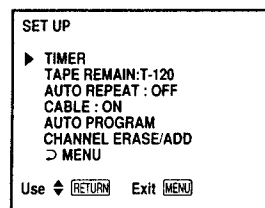


For presetting and other functions

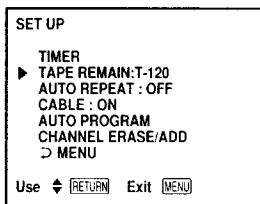
Main menu



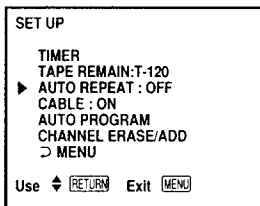
SET UP menu (pp. 12-17, 25-29)



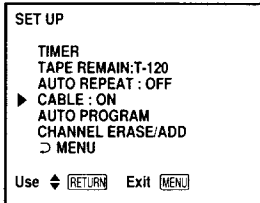
TIMER screen (pp. 25-35)



TAPE REMAIN screen (p. 42)



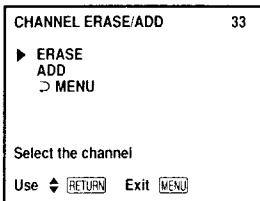
AUTO REPEAT ON/OFF screen (p. 39)



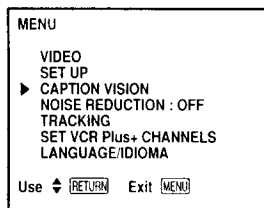
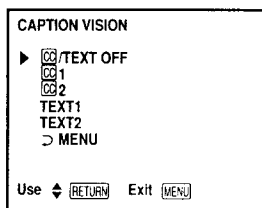
CABLE ON/OFF screen (p. 12)



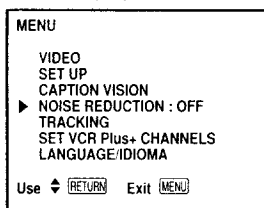
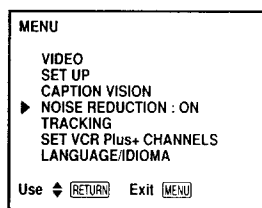
AUTO PROGRAM screen (pp. 13-14)



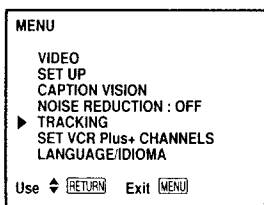
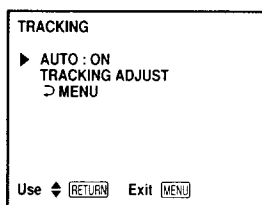
CHANNEL ERASE/ADD screen (pp. 15-17)

For closed caption setting**Main menu****CAPTION VISION menu**

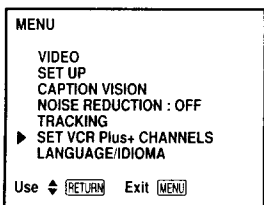
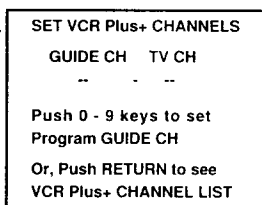
CAPTION VISION screen (p. 23)

For noise reduction function**Main menu****NOISE REDUCTION menu**

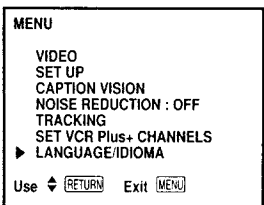
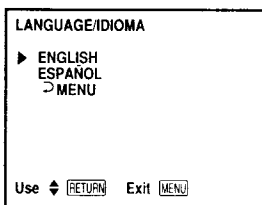
NOISE REDUCTION screen (p. 24)

For tracking adjustment function**Main menu****TRACKING menu**

TRACKING screen (p. 41)

For VCR Plus+ CHANNELS setting**Main menu****SET VCR Plus+ CHANNELS menu**

SET VCR Plus+ CHANNELS screen (p. 44-46)

For on screen language selection function**Main menu****LANGUAGE SELECTION menu****To select the LANGUAGE/IDIOMA**Press Δ + or ∇ - to select the desired language mode. And, press RETURN.**Navigating Through the Menus**

Use the buttons on the remote commander.

To display the main menu

Press MENU.

To return to the normal screen

Press MENU on the Remote Commander.

To return to the previous menuPress Δ + or ∇ - to select MENU.

Then press RETURN.

To return to the main menu

Repeat the above, until you reach the main menu.

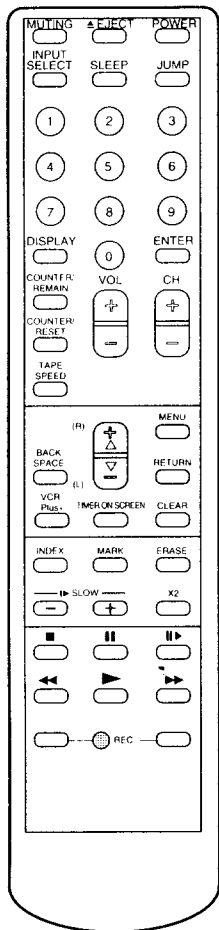
Note

The menus disappear automatically if you do not press a button within 60 seconds.

Turning the Cable Mode On or Off

All of the controls are on the Remote Commander.

If you have cable connected to your VIDEO TV (p. 8-9) follow the steps below to turn the cable connection on or off. CABLE is preset to OFF when you use your VIDEO TV for the first time. Turn CABLE to OFF to preset or watch VHF or UHF channels.

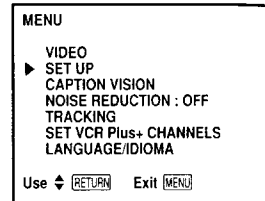
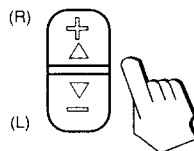


RM-Y138/W

1 Press MENU.

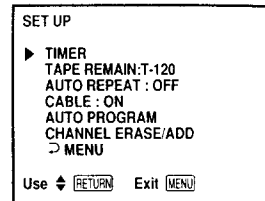
The Main Menu appears

Press Δ + or ∇ - to select SET UP, in main menu.

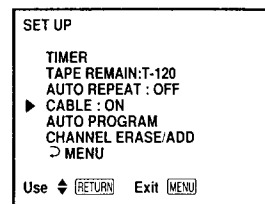
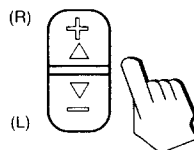


Press RETURN.

The SET UP menu appears.

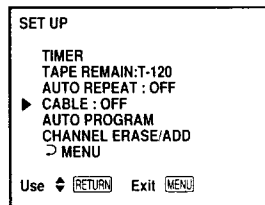
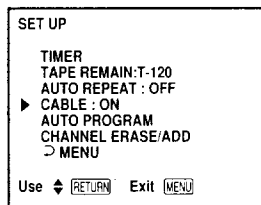


2 Press Δ + or ∇ - to select CABLE.



Press RETURN.

3 Press Δ + or ∇ - to select ON or OFF alternately.



Press RETURN.

The setting is completed.



To return to the normal screen
Press MENU.

Note

If the VIDEO TV is in LINE mode, you cannot select CABLE. Repeatedly press INPUT SELECT to change to TV mode.

Presetting TV Channels



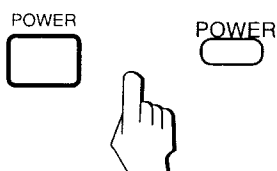
Once you have preset the channels on your VIDEO TV, you will be able to use the channel +/- buttons on the VIDEO TV or the Remote commander to scan the channel you selected.

Presetting TV Channels Automatically

Note

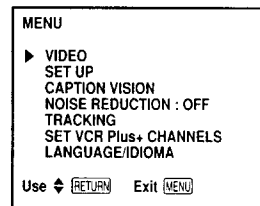
Perform auto programming during the day rather than late at night, when some channels may not be broadcasting.

- 1 Press POWER on the VIDEO TV or the Remote Commander to turn the VIDEO TV on.

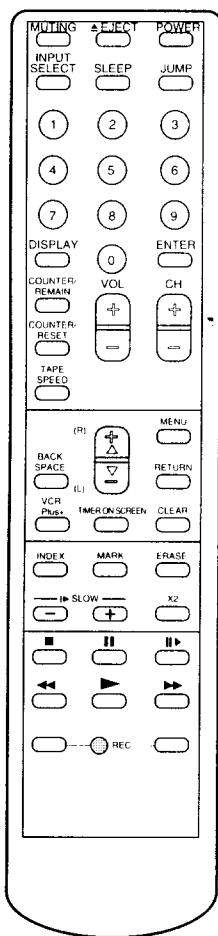
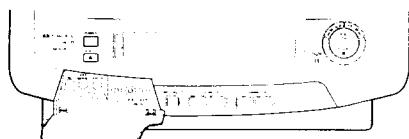
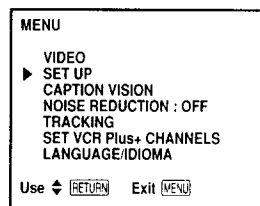
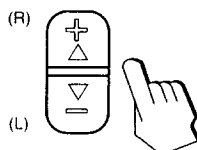


- 2 Using the Menu, select cable off to receive VHF/UHF channel. Select cable on to receive cable stations.
(Follow the steps in "Turning the Cable Mode On or Off", p. 12.)

- 3 Press MENU.
The main menu appears.

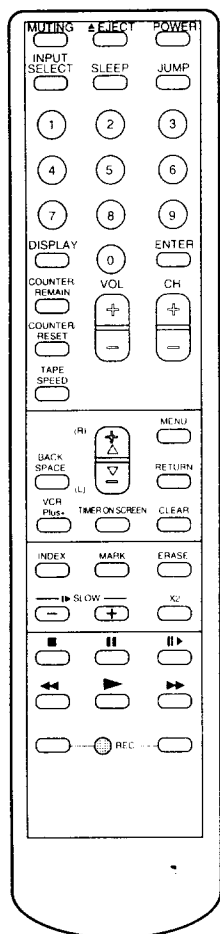


- 4 Press Δ + or ∇ - to select SET UP.



RM-Y138/W

Presetting TV Channels



RM-Y138/W

Receivable channels for this TV

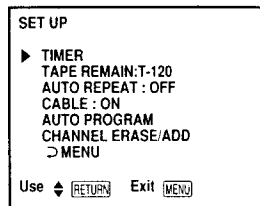
VHF: 2-13
UHF: 14-69
Cable: 1-125

To select TV channels without presetting
Press 0-9.

To return to the normal screen
Press MENU.

To erase unnecessary channels, or to add channels that could not be preset automatically because their signal was too weak, follow the steps in "Erasing Unnecessary Channels CHANNEL ERASE" and "Presetting Only Desired Channels-CHANNEL ADD" (pp. 15-17).

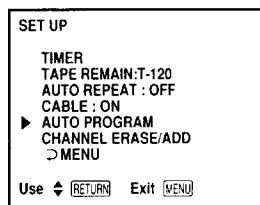
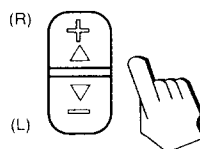
Press RETURN.
The SET UP menu appears.



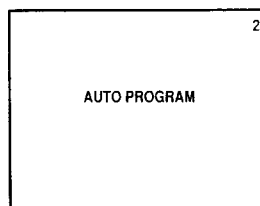
Note

If the VIDEO TV is in LINE mode, you cannot select AUTO PROGRAM. Press INPUT SELECT to change to TV mode.

5 Press Δ + or ∇ - to select AUTO PROGRAM.



Press RETURN.



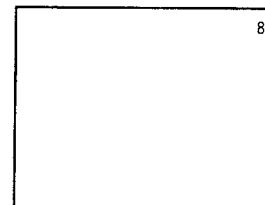
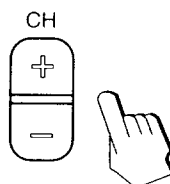
"AUTO PROGRAM" appears on the screen and receivable channels (other than the channels already preset) are preset in numerical sequence. The channels previously preset will not remain in the TV's memory. When no more channels can be found, the programming stops and the lowest numbered channel is displayed.



Erasing Unnecessary Channels - CHANNEL ERASE

Use this feature to erase unnecessary TV channels, so that when you press CH+/-, the channel(s) are skipped.

- 1 Press the CH +/- button to select the channel you want to erase.
For example, to erase channel 8, press CH + or - until 8 appears.



- 2 Press MENU.
The main menu appears.

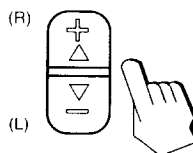


MENU

- ▶ VIDEO
- SET UP
- CAPTION VISION
- NOISE REDUCTION : OFF
- TRACKING
- SET VCR Plus+ CHANNELS
- LANGUAGE/IDIOMA

Use \blacktriangleleft [RETURN] Exit [MENU]

- 3 Press \triangle + or ∇ - to select SET UP.



Press RETURN.
The SET UP menu appears.



MENU

- VIDEO
- ▶ SET UP
- CAPTION VISION
- NOISE REDUCTION : OFF
- TRACKING
- SET VCR Plus+ CHANNELS
- LANGUAGE/IDIOMA

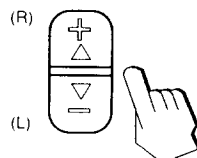
Use \blacktriangleleft [RETURN] Exit [MENU]

SET UP

- ▶ TIMER
- TAPE REMAIN:T-120
- AUTO REPEAT : OFF
- CABLE : ON
- AUTO PROGRAM
- CHANNEL ERASE/ADD
- ▷ MENU

Use \blacktriangleleft [RETURN] Exit [MENU]

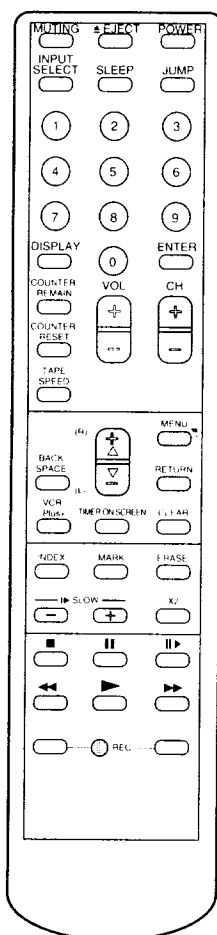
- 4 Press \triangle + or ∇ - to select CHANNEL ERASE/ADD.



SET UP

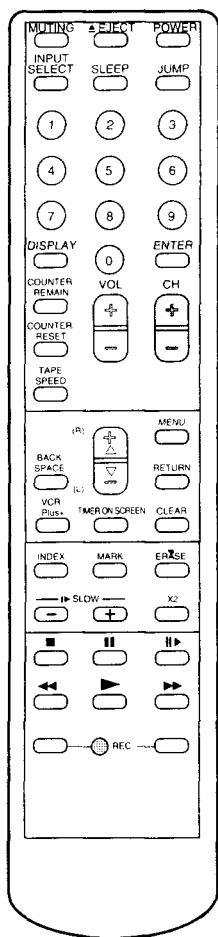
- TIMER
- TAPE REMAIN:T-120
- AUTO REPEAT : OFF
- CABLE : ON
- AUTO PROGRAM
- ▶ CHANNEL ERASE/ADD
- ▷ MENU

Use \blacktriangleleft [RETURN] Exit [MENU]



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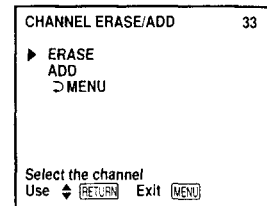
Presetting TV Channels



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Press RETURN.

The CHANNEL ERASE/ADD screen appears, and the cursor points to ERASE.

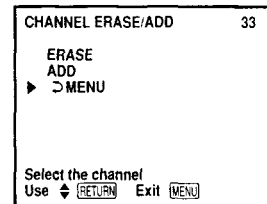


Note

If the VIDEO TV is in LINE mode, you cannot select CHANNEL ERASE/ADD. Press INPUT SELECT to change to TV mode.

5 Press RETURN.

A "." sign appears in front of the channel number display showing that the channel is erased from the channel scan memory.



6 Press MENU.



The next time you press the CH +/- buttons, channel 8 will be skipped.

To erase other channels

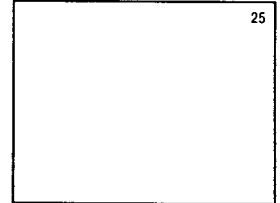
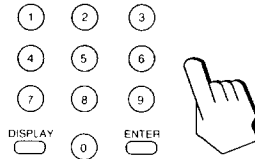
Repeat steps 1-6.

To return to the normal screen
Press MENU.

Presetting Only Desired Channels - CHANNEL ADD

Use this feature to add channels one at a time to the channel scan memory.

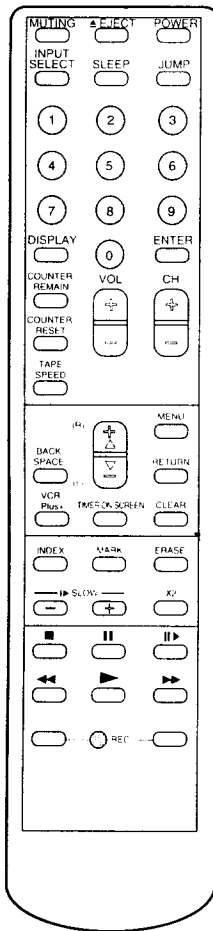
- 1 Press 0-9 to select the channel you want to add. For example, to add channel 25, Press 2, 5 and ENTER.



- 2 - 4 (Follow steps 2-4 in "Erasing Unnecessary Channels-CHANNEL ERASE," pp. 15-16)

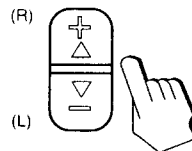
Note

If the TV is in LINE mode, you cannot select CHANNEL ERASE/ADD. Press INPUT SELECT to change to TV mode.



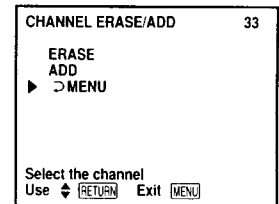
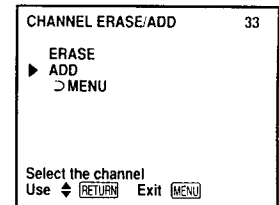
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- 5 Press Δ + or ∇ - to select ADD.



Press RETURN.

A "+" sign appears in front of the channel number display showing that the channel is added to the channel scan memory.



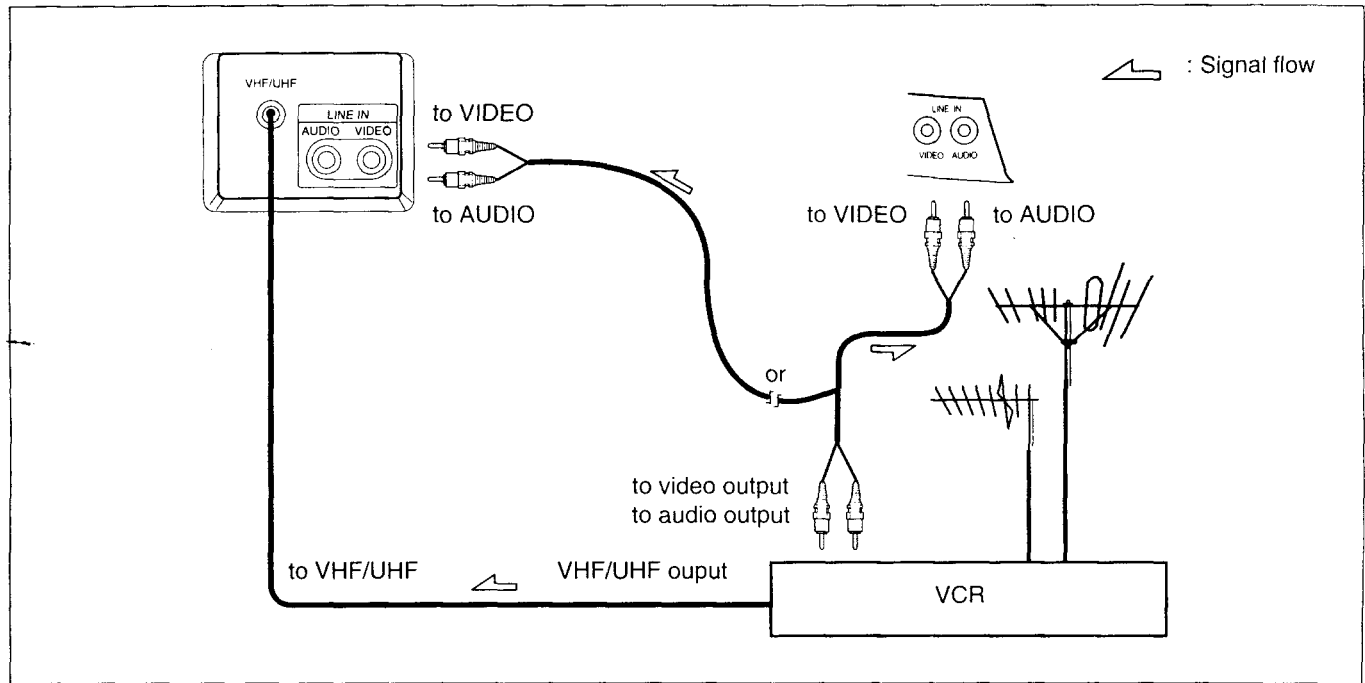
- 6 Press MENU.

To add other channels

Repeat steps 1-6.

To return to the normal screen
Press MENU.

Connecting Other Equipment



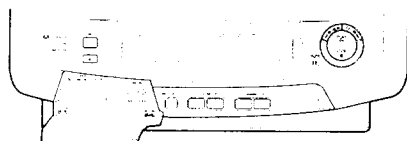
1 Remove the antenna cable from the VIDEO TV Antenna terminal. Connect the antenna cable to the antenna terminal of the other Video/Audio source (ex. Video recorder). Then connect a coaxial cable from the VHF output terminal back to the antenna terminal of the VIDEO TV.

2 To use your VIDEO TV to monitor an audio/video source (such as another VCR, a Camcorder or a Laser Disc Player), connect the audio/video source output jacks to the AUDIO/VIDEO IN jacks on the rear panel or front door of the VIDEO TV. Then select LINE IN using the PLAY ON on the front door.

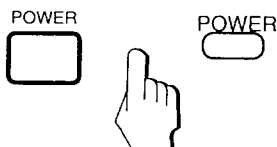
Notes

- Press PLAY ON on the front door of the VIDEO TV so that "LINE" appears on the screen.
- To return to TV mode, repeatedly press INPUT SELECT on the VIDEO TV or on the Remote Commander so that a channel number appears on the screen.
- For operating instructions, refer to the instruction manual furnished with the VCR.
- If the picture or sound is affected, move the VCR away from the VIDEO TV.

Watching TV Programs



- 1 Press POWER on the VIDEO TV or the Remote Commander to turn the TV on.



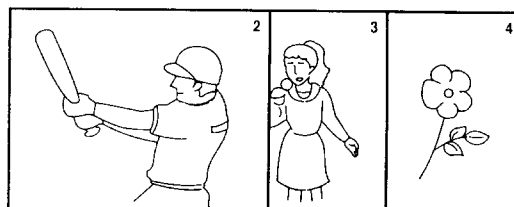
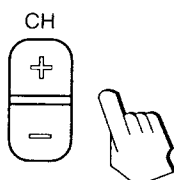
- 2 Turn the cable mode on or off to select the type of channel you want to watch, VHF/UHF or cable TV.
(Follow the steps in "Turning the Cable Mode On or Off," p.12.)

If "LINE" is displayed on the screen, press INPUT SELECT on the Remote Commander so that the channel number appears.

- 3 Select a channel in one of the following two ways:

To scan the preset channels* in numerical sequence

Press CH +/-.



* For more information on presetting channels, see pp. 13-17.

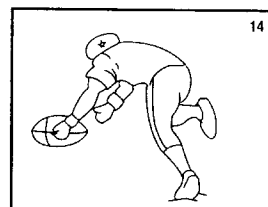
To select a channel directly

Press 0-9.

For example, to select channel 14, press 1 and 4.

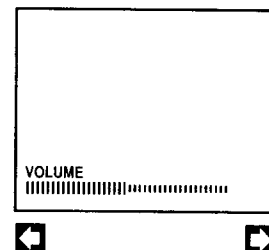
You don't have to press ENTER after having pressed the desired channel number. The channel is directly selected if you do not press ENTER after 3 seconds.

But press ENTER to select a channel quickly.



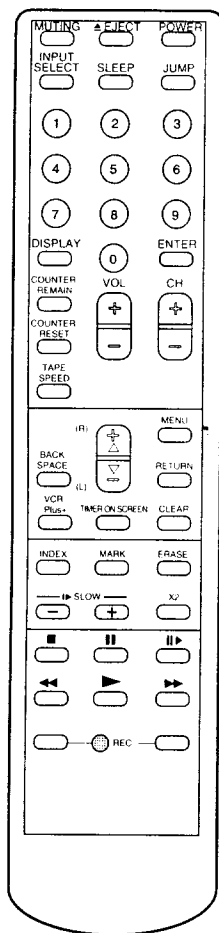
- 4 Press VOL +/- to adjust the volume.

Press VOL + to increase the volume.
Press VOL - to decrease the volume.



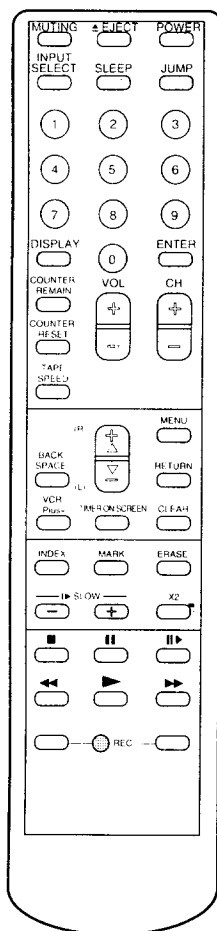
To turn off the TV

Press POWER on the TV or the Remote Commander again.



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Using Convenient Features

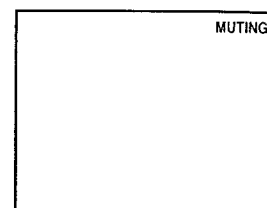


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Muting the Sound - MUTING

Press **MUTING**.
The display "MUTING" will appear on the screen.

To restore the sound
Press **MUTING** again.



Keeping the Displays On-Screen - DISPLAY

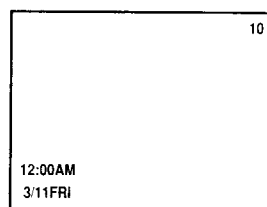
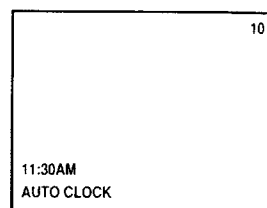
If **AUTO CLOCK** has been set when you turn the **VIDEO** TV on, the display will appear for about 3 seconds as shown right.

To display the channel

Press **DISPLAY**.
All the existing displays appear: channel number, date, time, VCR operating mode and tape counter.

To cancel the display

Press **DISPLAY** again.
The display will disappear.



Setting the Sleep Timer - SLEEP

The sleep timer turns off the TV automatically after the amount of time you select.

Press **SLEEP**.
Each time you press **SLEEP**, the time increments 30, 60, 90 and OFF mode appear in sequence.



	SLEEP OFF
	SLEEP 30
	SLEEP 60
	SLEEP 90

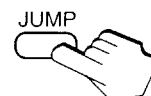
The **SLEEP** display appears about one minute before the TV turns off.

To cancel the setting

Press **SLEEP** until **OFF** mode appears.
The "SLEEP OFF" display appears for about three seconds.
OR
Turn the TV off.
The sleep timer setting is cancelled.

Switching Quickly Between Two Channels - JUMP

Press **JUMP** once to recall the channel you were watching previously. Press **JUMP** again to switch back. Use this feature to keep track of two programs alternately.

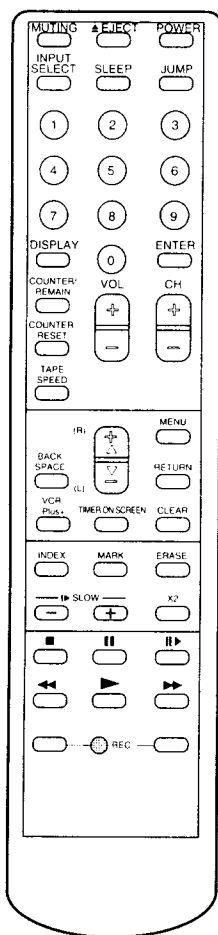


Adjusting Picture Quality

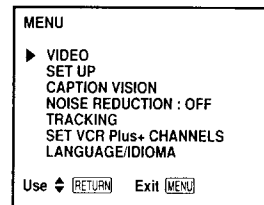


You can adjust the picture for each input mode (TV mode, LINE) by pressing INPUT SELECT to select the input mode before making the adjustments. These adjustments are retained in memory even when you turn off the TV until you change the adjustments again.

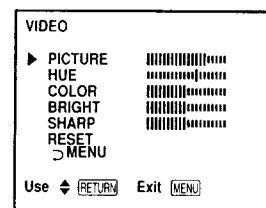
- 1 Press MENU.
The main menu appears, and the cursor points to VIDEO.



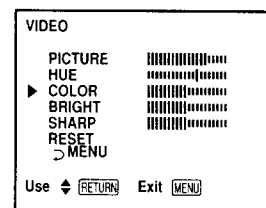
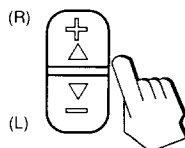
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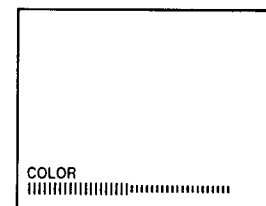
- 2 Press RETURN.
The VIDEO menu appears.



- 3 Press Δ + or ∇ - to select the item you want to adjust.
For example, to adjust the picture color, select COLOR.

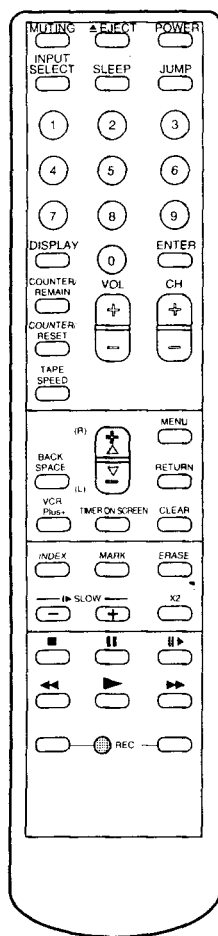


Press RETURN.
The adjustment bar appears.

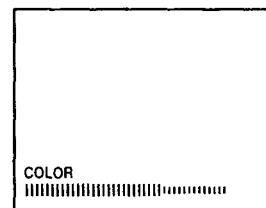
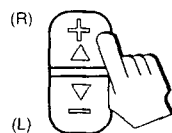


Adjusting Picture Quality

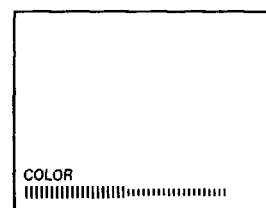
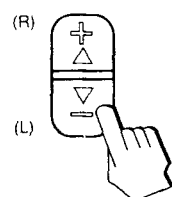
4 Press $\Delta +$ or $\nabla -$ to make the adjustment.



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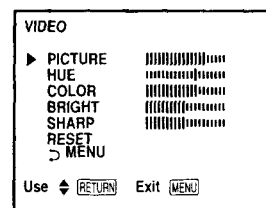


Increase color intensity



Decrease color intensity

Press RETURN.
The new setting appears in the VIDEO menu.



To adjust other items
Repeat steps 3-4.

	Press $\nabla -$ to :	Press $\Delta +$ to :
PICTURE	decrease picture contrast with soft color	increase picture contrast with vivid color
HUE	make skin tones become purplish	make skin tones become greenish
COLOR	decrease color intensity	increase color intensity
BRIGHT	darken the picture	brighten the picture
SHARP	soften the picture	sharpen the picture

To return to the normal screen
Press MENU.

To restore the factory (mid-level) setting
Go to the VIDEO menu and select RESET by pressing $\Delta +$ or $\nabla -$. Then press RETURN. All the settings except for PICTURE will be restored to mid-level settings.

Using Closed Caption

- 1 Press MENU.
The main menu appears.

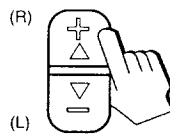


MENU

- ▶ VIDEO
- SET UP
- CAPTION VISION
- NOISE REDUCTION : OFF
- TRACKING
- SET VCR Plus+ CHANNELS
- LANGUAGE/IDIOMA

Use RETURN Exit MENU

- 2 Press or to select CAPTION VISION.
Then press RETURN.
The CAPTION VISION screen appears.



CAPTION VISION

- ▶ /TEXT OFF
- 1
- 2
- TEXT1
- TEXT2
- ▷ MENU

Use RETURN Exit MENU

- 3 Press or to select closed caption mode.

Select CC1 or CC2 to view Captions.
A Caption is a printed version of the dialogue or sound effects of a program. (The mode should be set to CC1 for most programs.)

CAPTION VISION

- ▶ /TEXT OFF
- 1
- 2
- TEXT1
- TEXT2
- ▷ MENU

Use RETURN Exit MENU

Select TEXT1 or TEXT2 to view Text.
Text is information that is presented using the full to full television screen.
It is usually not related to the program.

CAPTION VISION

- /TEXT OFF
- 1
- 2
- ▶ TEXT1
- TEXT2
- ▷ MENU

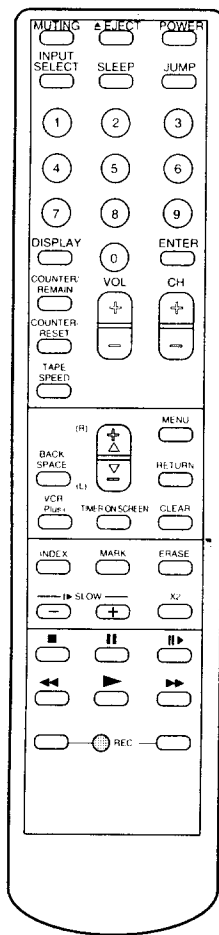
Use RETURN Exit MENU

Select CC/TEXT OFF if you do not want to use the CAPTION VISION mode.

CAPTION VISION

- ▶ /TEXT OFF
- 1
- 2
- TEXT1
- TEXT2
- ▷ MENU

Use RETURN Exit MENU



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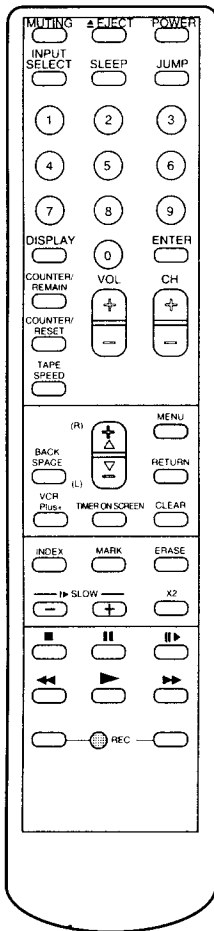
Press RETURN.
The Setting is completed.

Note

Captions may appear with a white box or another error instead of a certain word. Poor reception of TV programs can also cause errors in Closed Caption.

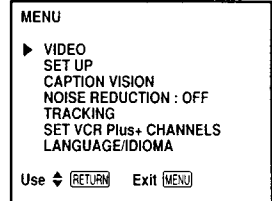
Using Noise Reduction Function

You can reduce the picture noise on the screen in VCR playback mode.

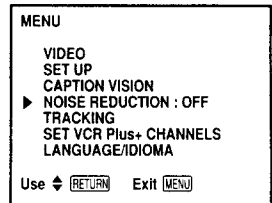
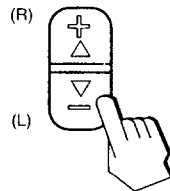


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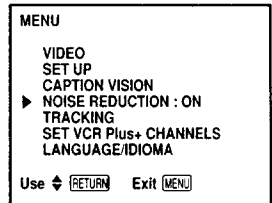
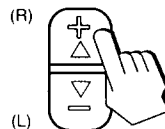
- 1** Press MENU.
The main menu appears, and the cursor points to VIDEO.



- 2** Press Δ + or ∇ - to select NOISE REDUCTION.



- 3** Press RETURN, then Δ + or ∇ - to select ON.



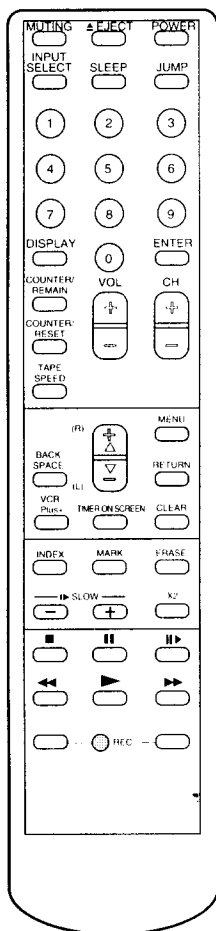
- 4** Press RETURN.
The picture noise is reduced.



Using the Timer-Activated Functions



Setting the Clock - AUTO CLOCK SET



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Notes

- The clock cannot be set automatically if you don't receive a channel that carries a time signal in your area. If so, set the clock manually (pp28-29).
- If there are only a few channels in your area that carry time signals, setting the clock automatically may take up to about 30 minutes. If nothing happens even after you wait about 30 minutes, set the clock manually.
- The menu disappears automatically if you don't proceed for more than one minute.

Before you use the timer feature for recording program, you need to set the current time and date.

Some TV and cable channels have started to transmit time signals with their broadcasts. Your VIDEO TV can pick up this time signal to automatically set the clock. After completing the steps below, when you turn off the VIDEO TV, it will automatically search for a channel that carries a time signal and set the clock. The Auto Clock Set feature only works if a channel in your area is broadcasting a time signal. If broadcasters in your area are not yet sending time signals, set the time manually (PP28 - 29).

Clock setting is necessary also to use ON/OFF TIMER, CHANNEL BLOCK, Timer Recording and VCR Plus Recording.

- Press MENU.
The main menu appears.

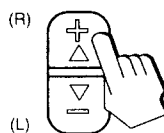


MENU

- ▶ VIDEO
- SET UP
- CAPTION VISION
- NOISE REDUCTION : OFF
- TRACKING
- SET VCR Plus+ CHANNELS
- LANGUAGE/IDIOMA

Use RETURN Exit MENU

- In main menu, press or to select SET UP.
Then press RETURN.
The SET UP screen appears.

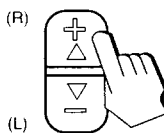


SET UP

- ▶ TIMER
- TAPE REMAIN:T-120
- AUTO REPEAT : OFF
- CABLE : OFF
- AUTO PROGRAM
- CHANNEL ERASE/ADD
- ▶ MENU

Use RETURN Exit MENU

- Press or to select TIMER.
Press RETURN.
The TIMER screen appears.

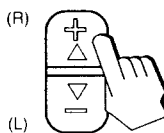


TIMER

- ▶ CURRENT TIME
- ON/OFF TIMER
- CHANNEL BLOCK
- ▶ MENU

Use RETURN Exit MENU

- Press or to select CURRENT TIME.
Press RETURN.
The CURRENT TIME screen appears.

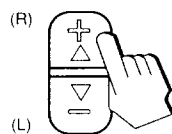


CURRENT TIME

- ▶ AUTO MANUAL
- ▶ MENU

Use RETURN Exit MENU

- Press RETURN then select AUTO by using or .

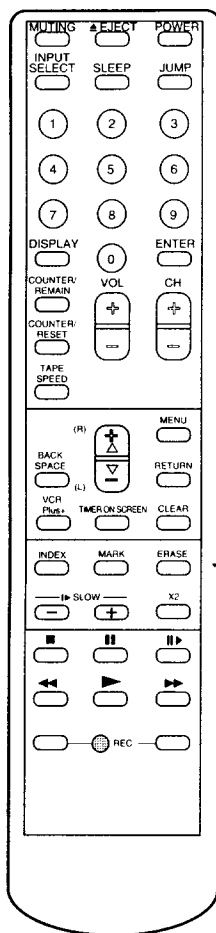


CURRENT TIME

- ▶ FULL AUTO OPTIONS

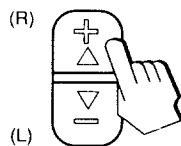
Use RETURN Exit MENU

Using the Timer-Activated Functions



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- 6 Press RETURN then select FULL AUTO by using Δ + or ∇ -. Press RETURN again.



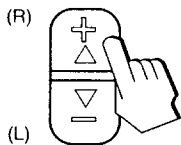
When clock data service is available, the clock is set automatically with leaving the TV off

- 7 To activate the Auto Clock Set function, turn the TV off.
The VIDEO TV automatically sets the clock.
The VIDEO TV automatically searches for a channel that carries a time signal and sets your time zone and daylight saving time (if applicable). If your clock sets, but displays the wrong time zone or daylight saving time, you can adjust these settings by following the steps below.

If the clock is not activated

- 1 Follow steps 1 to 5 above.
- 2 Press RETURN then select OPTIONS by using Δ + or ∇ -. Press RETURN again.

The CURRENT TIME SET CH screen appears.



CURRENT TIME SET CH
▶ AUTO MANUAL
[CH---]

Use Δ RETURN Exit MENU

- 3 Press RETURN, then press Δ + or ∇ - to select AUTO or MANUAL.

If you select AUTO:

The VIDEO TV automatically searches for a channel that carries a time signal.

CURRENT TIME SET CH
▶ AUTO MANUAL
[CH---]

Use Δ RETURN Exit MENU

If you select MANUAL:

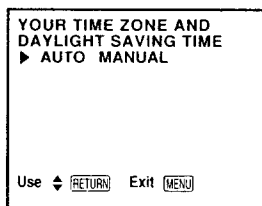
Set a channel that carries a time signal using the number buttons. Use this option if you know that channel. Most PBS member stations broadcast a time signal. For the fastest response, set the VIDEO TV to your local PBS station.

CURRENT TIME SET CH
▶ AUTO MANUAL
[CH---]
Push 0-9 keys to set CURRENT TIME for clock
Then push RETURN
Use Δ RETURN Exit MENU



4 Press RETURN.

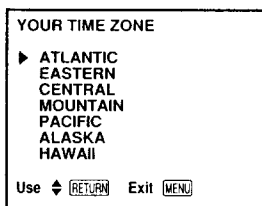
The **YOUR TIME ZONE AND DAYLIGHT SAVING TIME** screen appears.



5 Press RETURN, then press Δ + or ∇ - to select AUTO or MANUAL.

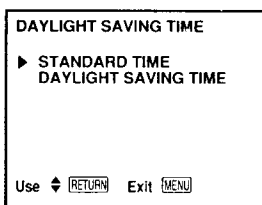
If you select **AUTO**:

The VIDEO TV automatically sets your time zone and daylight saving time (if applicable).



If you select **MANUAL**:

1. Press RETURN, then set the time zone of your area using Δ + or ∇ -.
2. Press RETURN, then select STANDARD TIME or DAYLIGHT SAVING TIME using Δ + or ∇ -.



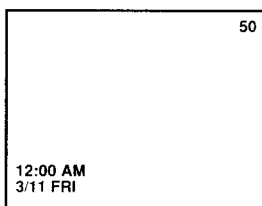
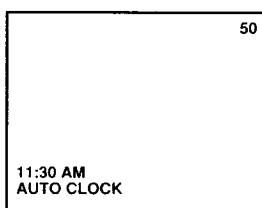
6 Press RETURN.



7 To activate the Auto Clock Set function, turn the TV off.

Notes

- If **AUTO CLOCK** has been set when you turn the VIDEO TV on, the display will appear as shown right. When the display does not appear as shown right even though **AUTO CLOCK** has been set: using the Manual Clock Set stops the automatic channel search when your set is power off. If the Auto Clock Set feature is not in use, the channel search is not performed when your set is power off.
- If you set the clock manually, the display will appear as shown right.



Notes

- Select **STANDARD**, if the **DAYLIGHT SAVING TIME** is not performed in your area.
- When you connect another VCR to the VHF/UHF antenna terminal, if VCR's tape is transmitted wrong time signal, your VIDEO TV automatically sets the clock by the time signal of the tape.

Not to set the clock by the time signal of VCR:

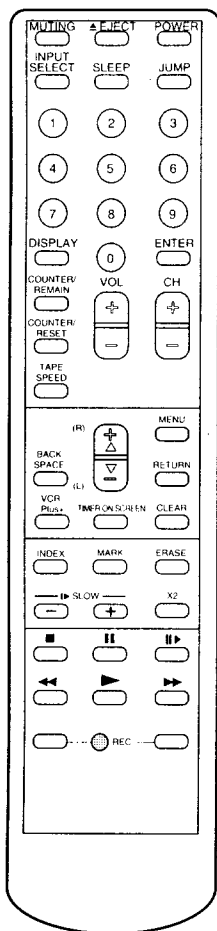
Turn your VIDEO TV off after having tuned VCR off or Set the clock manually on your VIDEO TV.

Using the Timer-Activated Functions

Setting the Clock - MANUAL CLOCK SET

EXAMPLE:

Set the time to 11:30AM, Sunday on the 25th of February, 1996.



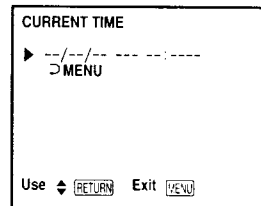
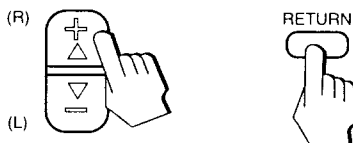
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1 In main menu, press $\Delta+$ or $\nabla-$ to select SET UP.
Then press RETURN.
The SET UP screen appears.

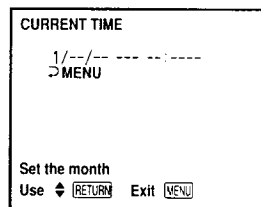
2 Press $\Delta+$ or $\nabla-$ to select TIMER.
Press RETURN.
The TIMER screen appears.

3 Press $\Delta+$ or $\nabla-$ to select CURRENT TIME.
Press RETURN.
The CURRENT TIME screen appears.

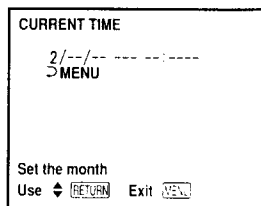
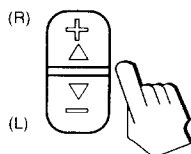
4 Press RETURN then select MANUAL by using $\Delta+$ or $\nabla-$.
Press RETURN.
The Manual Clock Set screen appears.



5 Press RETURN.
“Set the month” appears on the screen.
The month will appear in red.

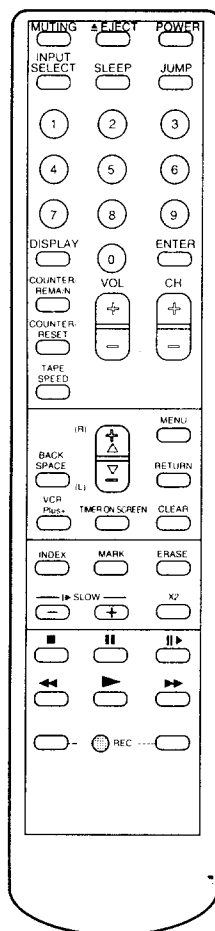


6 Press $\Delta+$ or $\nabla-$ to set the month.
Each time you press $\Delta+$ or $\nabla-$, the month changes in sequence.



To change or correct the setting before completing it
Press BACK SPACE to return to the item to be erased.

Using the Timer-Activated Functions



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To display the time
Press DISPLAY.

To return to the normal screen
Press MENU.

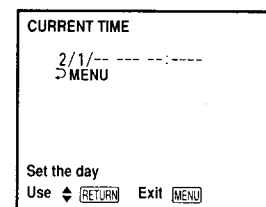
Notes

- The internal clock of this VIDEO TV operates on a 12-hour cycle.

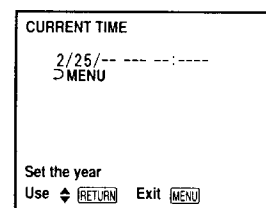
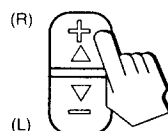
12:00 AM stands for midnight.
12:00 PM stands for noon.

- All the settings including CLOCK will be erased if you unplug the VIDEO TV or a power failure occurs. Reset the current time by following steps 1-11.
- You cannot change the clock during Timer Recording. To change the clock, stop the recording.

- 7** Press RETURN.
"Set the day" appears on the screen.

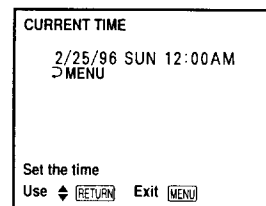


- 8** Press Δ + or ∇ - to set the day.
Each time you press Δ + or ∇ -, the day changes consecutively.
Press RETURN.
"Set the year" appears on the screen.



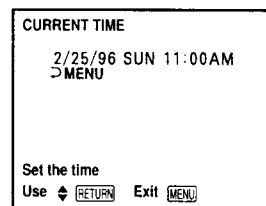
- 9** Press Δ + or ∇ - to set the year.
Each time you press Δ + or ∇ -, the year changes in sequence and the day of the week automatically changes.

Press RETURN.
"Set the time" appears on the screen.



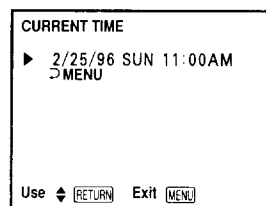
- 10** Press Δ + or ∇ - to set the hour.
Each time you press Δ + or ∇ -, the hour changes in sequence starting with "12:00AM."

Press RETURN.



- 11** Press Δ + or ∇ - to set the minute.
Each time you press Δ + or ∇ -, the minute changes in sequence.

Press RETURN.
The setting is completed and the clock starts.

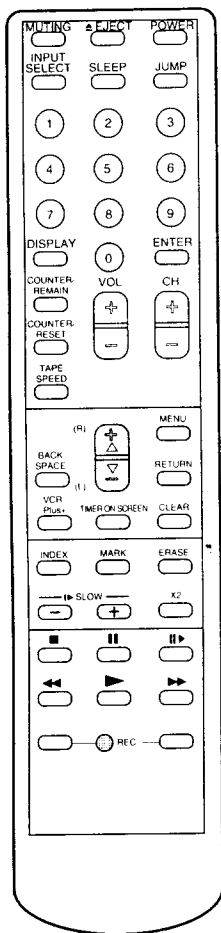


Using the Timer-Activated Functions

Setting the ON/OFF TIMER

With this function you can set your favorite program to appear on the screen at the time that you set.

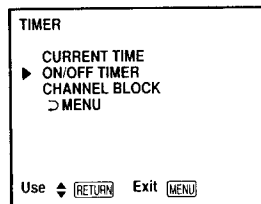
EXAMPLE: Set the timer to turn on the VIDEO TV every Monday through Friday at 3:15 PM for 2 hours, on channel 21.



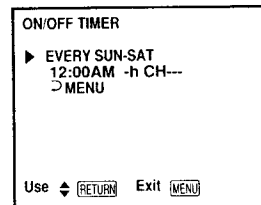
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- 1** In main menu, press Δ + or ∇ - to select SET UP.
Then press RETURN.
The SET UP screen appears.

- 2** Press Δ + or ∇ - to select TIMER.
Press RETURN.
The TIMER screen appears.



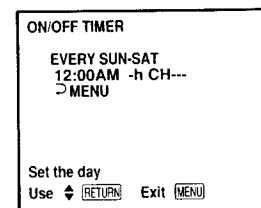
- 3** Press Δ + or ∇ - to select ON/OFF TIMER.
Press RETURN.
The ON/OFF TIMER screen appears.

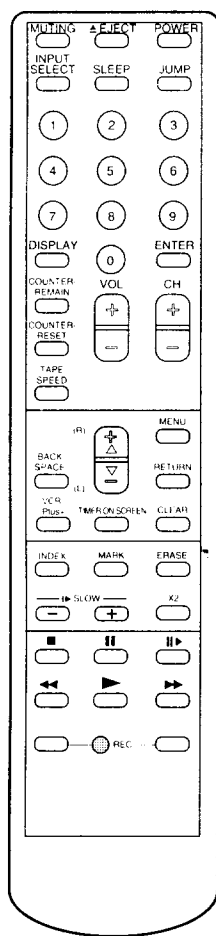


Note

If the ON/OFF TIMER display does not function, the current time has not been set and you cannot select ON/OFF TIMER. To set the clock, see "Setting the Clock-AUTO CLOCK SET/MANUAL CLOCK SET," PP 25-29.

- 4** Press RETURN.
"Set the day" appears on the screen.
"EVERY SUN-SAT" will be changed in red.

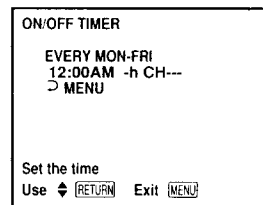
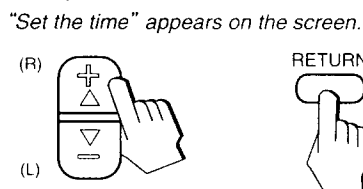




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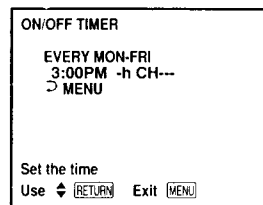
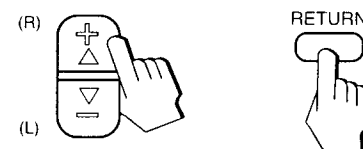
- 5** Press Δ + or ∇ - to set the day.
Each time you press Δ + or ∇ -, the days of the week change as shown in Fig. 1 (page 32).

Then press RETURN.



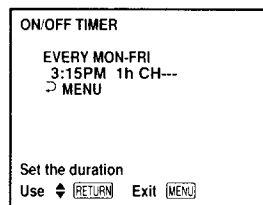
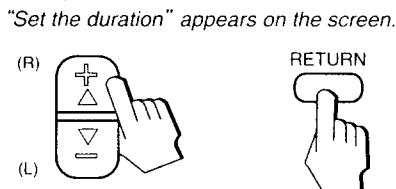
- 6** Press Δ + or ∇ - to set the hour that you want the TIMER to start.
Each time you press Δ + or ∇ -, the hour changes in sequence.

Then press RETURN.



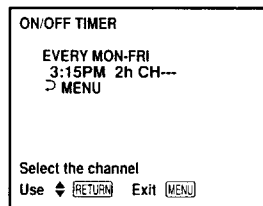
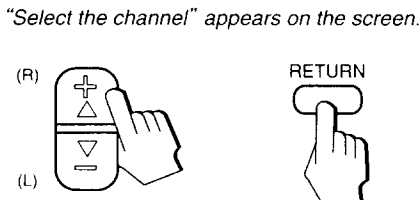
- 7** Press Δ + or ∇ - to set the minutes.
Each time you press Δ + or ∇ -, the minutes change in sequence.

Then press RETURN.



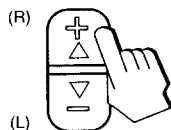
- 8** Press Δ + or ∇ - to set the duration of time.
Each time you press Δ + or ∇ -, the duration changes from "1" to "9" in sequence.

Then press RETURN.

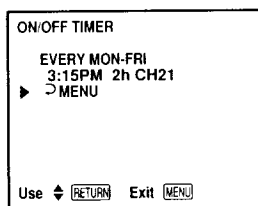
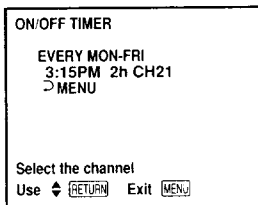


Using the Timer-Activated Functions

- 9** Press $\Delta+$ or $\nabla-$ to set the channel that you want the TV to tune in.
Each time you press $\Delta+$ or $\nabla-$, the channel number changes in sequence.



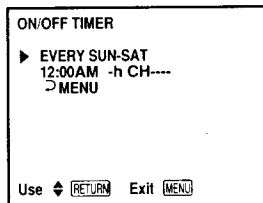
Press RETURN.
The setting is completed.



Cancelling the ON/OFF TIMER

- 1** Select the ON/OFF TIMER screen (Refer to pp. 30 - 32).
Press RETURN.
"EVERY SUN-SAT" will appear in red.

- 2** Press BACK SPACE to erase the ON/OFF TIMER.



To Change or Correct Setting the ON/OFF TIMER

Before completing it

Press BACK SPACE to return to the item to be changed or corrected.

When it is displayed in red, set it again by using the $\Delta+$ or $\nabla-$.

After completing it

Select the ON/OFF TIMER screen.

Then, press RETURN to return to the item to be changed or corrected.

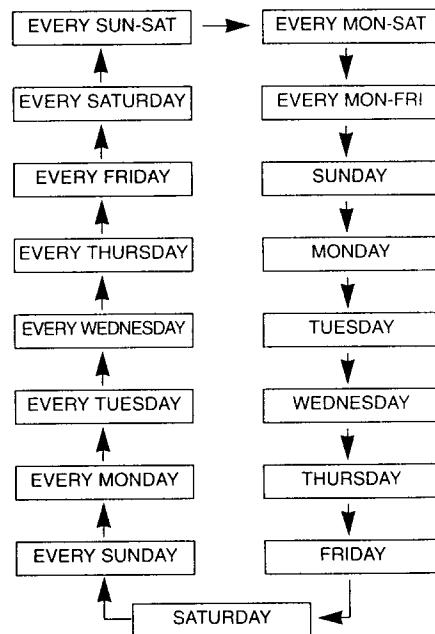
When it is displayed in red, set it again by using the $\Delta+$ or $\nabla-$.

Notes

- One minute before the timer goes off, the "TV will turn off" will appear on the screen.
- If you have not set the clock correctly, the ON/OFF TIMER will not operate at the proper time. To set the clock, see "Setting the Clock-AUTO CLOCK SET/MANUAL CLOCK SET," pp 25-29.
- All the settings including ON/OFF TIMER will be erased if you unplug the VIDEO TV or a power failure occurs. Reset the TIMER by following steps 1-9.

Fig. 1
Selecting the day(s) of the week

When you press $\Delta+$, the days of the week appear in the following order.



($\nabla-$: reverse order)

Note

To return to the normal screen
Press MENU.

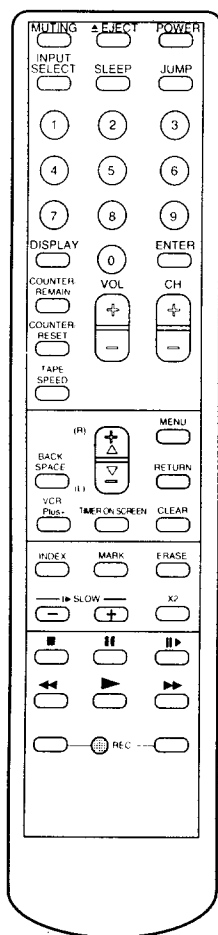
If "RESET CHANNEL BLOCK AND TRY AGAIN" appears on the screen when you completed the setting of the ON/OFF TIMER.

The ON/OFF TIMER setting overlaps the setting of the day, time, duration and channel of the CHANNEL BLOCK. Change the setting of the CHANNEL BLOCK or the channel setting of the ON/OFF TIMER.



Setting the CHANNEL BLOCK

This feature allows you to prevent children from watching unsuitable programs. Make sure the clock is set correctly. If it is not, set the clock first (pp. 25 - 29).

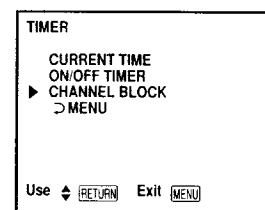
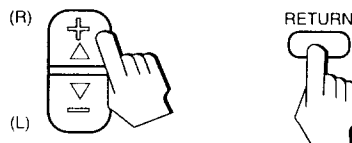


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- 1 In main menu, press Δ + or ∇ - to select SET UP.

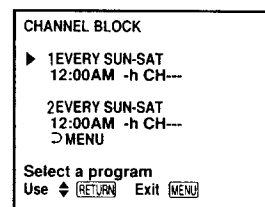
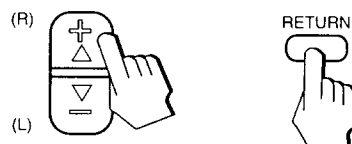
Then press RETURN.
The SET UP screen appears.

- 2 Press Δ + or ∇ - to select TIMER.
Press RETURN.
The TIMER screen appears.

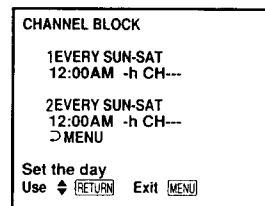


- 3 Press Δ + or ∇ - to select CHANNEL BLOCK.
Then press RETURN.
The CHANNEL BLOCK screen appears.

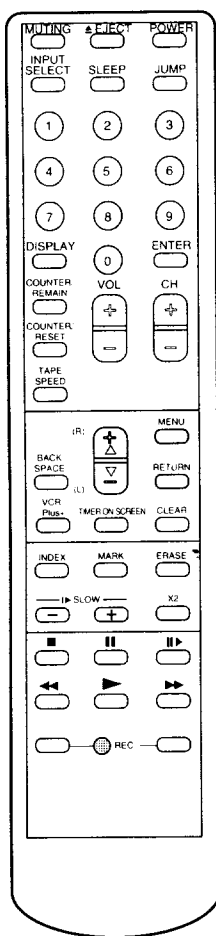
"Select a program" appears on the screen.



- 4 Press RETURN again.
"Set the day" appears on the screen.



Using the Timer-Activated Functions



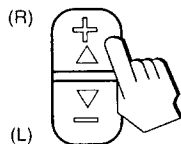
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5 Press Δ + or ∇ - to set the day.

Each time you press Δ + or ∇ -, the days of the week change as shown in Fig. 1 (page 32).

Then press RETURN.

"Set the time" appears on the screen.



CHANNEL BLOCK

1 EVERY MON-FRI
12:00AM -h CH---

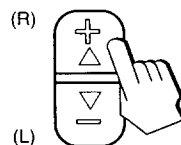
2 EVERY SUN-SAT
12:00AM -h CH---
▷ MENU

Set the time
Use Δ (RETURN) Exit (MENU)

6 Press Δ + or ∇ - to set the hour that you want to start blocking time.

Each time you press Δ + or ∇ -, the hour changes in sequence.

Then press RETURN.



CHANNEL BLOCK

1 EVERY MON-FRI
3:00PM -h CH---

2 EVERY SUN-SAT
12:00PM -h CH---
▷ MENU

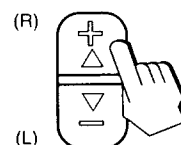
Set the time
Use Δ (RETURN) Exit (MENU)

7 Press Δ + or ∇ - to set the minutes.

Each time you press Δ + or ∇ -, the minutes change in sequence.

Then press RETURN.

"Set the duration" appears on the screen.



CHANNEL BLOCK

1 EVERY MON-FRI
3:15PM 1h CH---

2 EVERY SUN-SAT
12:00AM -h CH---
▷ MENU

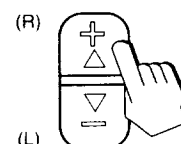
Set the duration
Use Δ (RETURN) Exit (MENU)

8 Press Δ + or ∇ - to set the duration of time.

Each time you press Δ + or ∇ -, the duration changes from "1" to "12" in sequence.

Then press RETURN.

"Select the channel" appears on the screen.



CHANNEL BLOCK

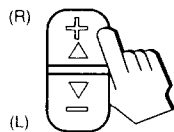
1 EVERY MON-FRI
3:15PM 2h CH---

2 EVERY SUN-SAT
12:00AM -h CH---
▷ MENU

Select the channel
Use Δ (RETURN) Exit (MENU)

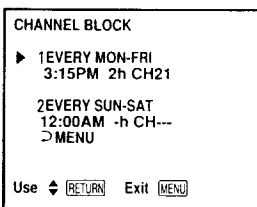
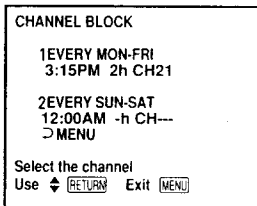
9 Press Δ + or ∇ - to set the channel that you want the TV to block out.

Each time you press Δ + or ∇ -, the channel number changes in sequence.



Press RETURN.

The setting is completed.



Notes

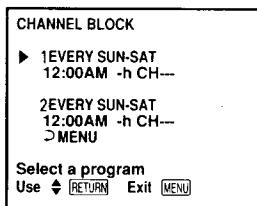
- If you have not set the clock correctly, the CHANNEL BLOCK will not operate at the proper time. To set the clock, see "Setting the Clock-Auto Clock Set/Manual Clock Set," pp 25-29.
- All the settings including CHANNEL BLOCK will be erased if you unplug the VIDEO TV or a power failure occurs. Reset the TIMER by following steps 1-9.
- If you select the blocked channel during the time you set, the message BLOCKED appears and the picture is blocked and the sound is muted.
- Recording is possible while the channel block is being activated.
- If the CHANNEL BLOCK and ON/OFF TIMER settings are overlapped, only the CHANNEL BLOCK function operates.

10 To set another program, repeat steps 1 to 3, press Δ + or ∇ - to select the next channel block and repeat steps 4 to 9.

Cancelling the CHANNEL BLOCK

1 Select the CHANNEL BLOCK screen. (Refer to page 33.) Press RETURN. EVERY SUN-SAT will appear in red.

2 Press BACK SPACE to erase the CHANNEL BLOCK.



To Change or Correct Setting the CHANNEL BLOCK

Before completing it

Press BACK SPACE to return to the item to be changed or corrected.

When it is displayed in red, set it again by using the Δ + or ∇ -.

After completing it

Select the CHANNEL BLOCK screen.

Then, press RETURN to return to the item to be changed or corrected.

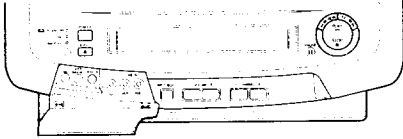
When it is displayed in red, set it again by using the Δ + or ∇ -.

Note

To return to the normal screen
Press MENU.

Using the Play On Functions

You can use PLAY ON on your VIDEO TV to monitor quickly other Video/Audio sources (such as a camcorder, a video game, etc).



1 Connect an AV cable(Video camera, Video game, etc) to LINE IN jacks on the front door or rear panel of your VIDEO TV.

2 Press the PLAY ON(Green Color button) inside the front door.
"LINE" appears on the screen.

Although your VIDEO TV is in TV mode or VCR play back mode, it turns to LINE IN mode directly by pressing PLAY ON.

When you press PLAY ON during the TV or VCR playback mode

Your VIDEO TV turns to LINE in mode.

To return to TV mode during play on mode

Press INPUT SELECT or CH +/-

When you press PLAY ON twice during power on

VIDEO TV turns off.

When you press PLAY ON during power off

Your VIDEO TV turns on and turns to LINE IN mode directly.

When you press this button again, your VIDEO TV will be turned off.

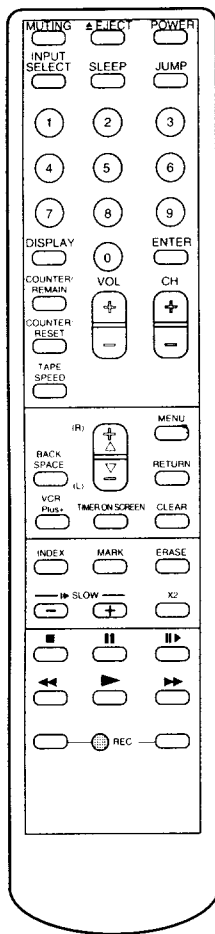
When you press PLAY ON during recording or LINE in mode,

The PLAY ON button does not operate.

To turn it off, press POWER.

Note

When the LINE IN jacks inside the front door and on the rear panel are connected to external equipment at the same time, the LINE IN jacks inside the front door are prior to them on the rear panel.

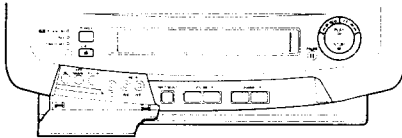


RM-Y138/W

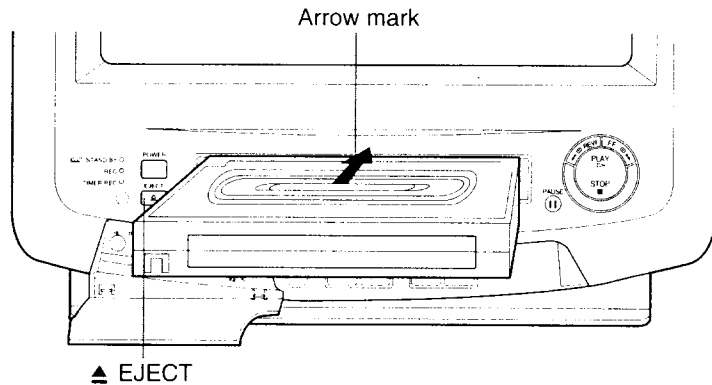
Playing Back a Video Tape




Inserting a Video Cassette



- 1 Insert a video cassette with the arrow mark facing upwards.




- 2 Gently press the center of the front side of the cassette until the mechanism draws it into the compartment.
When the cassette has been inserted, the  / STAND BY indicator lights and the VIDEO TV turns on automatically.

Note

When you insert a cassette without a safety tab, playback starts automatically (AUTO PLAYBACK function).

Ejecting the cassette

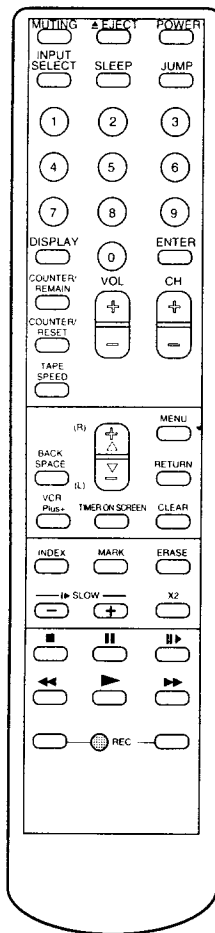
Press EJECT .

You can also eject the cassette when the power is off.

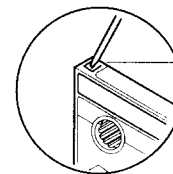
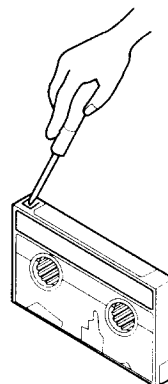
Protecting your cassette against accidental erasure

The cassette is provided with a safety tab to protect against accidental recording. Break off the safety tab with a screwdriver or other suitable tool.

If the safety tab is removed, the cassette will be ejected when you try to record on the cassette.



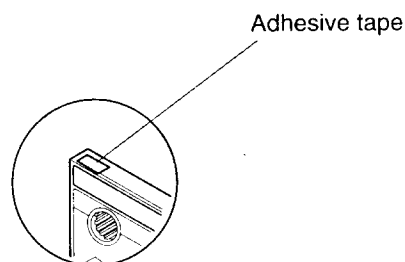
RM-Y138/W



Safety tab

Playing Back a Video Tape

To record on a cassette with the safety tab broken off, simply cover the tab hole with adhesive tape.



Maximum recording time of a tape

The quality of tape you use greatly affects record/playback quality and the life of the VIDEO TV. Use only cassette tapes that have the official VHS logo.

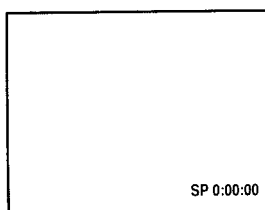
High-grade tapes give the best results, especially at the EP speed. They also have a better oxide coating that helps prevent dirty video heads. Although T-160 tapes offer the longest recording time, they contain thinner tape that is more likely to stretch or cause tape jams. We suggest that you use T-120 or shorter tapes.

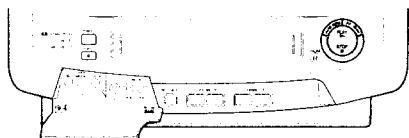
Recording in the SP or EP mode is possible with this unit. When recording, select the desired recording mode (SP or EP) with TAPE SPEED on the Commander. During playback, the unit automatically detects the recording format, and then plays back the tape in the appropriate mode.

The following chart shows the maximum recording times for T-60, T-120 and T-160 tapes at the recording speeds as below.

Speed	T-60	T-120	T-160
SP	1 Hour (60 Minutes)	2 Hours (120 Minutes)	2 2/3 Hours (160 Minutes)
EP	3 Hours (180 Minutes)	6 Hours (360 Minutes)	8 Hours (480 Minutes)

Playing back a video tape in the LP mode is possible but recording in this mode is not possible with this unit.





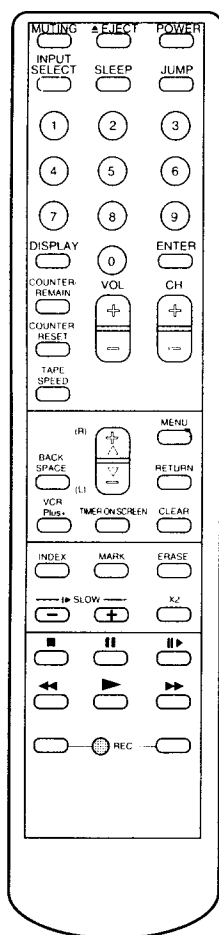
Playing Back a Prerecorded Cassette Tape

- 1 Insert a prerecorded cassette into the tape compartment. The VIDEO TV automatically turns on.

Note

When playing back rental tapes, select NOISE REDUCTION:ON in main menu image detail improves.

- 2 If playback does not start, press PLAY ►. The tape plays back at the speed at which was recorded.



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To stop playback

Press STOP ■.

To stop playback for a moment

Press PAUSE ||.

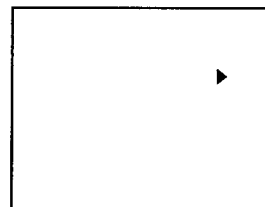
||► appears on the screen and image will stop on the screen.

To resume playback, press PAUSE || or PLAY ►.

► appears on the screen.

When the tape is played back to the end

The tape is automatically rewound to the beginning (auto rewind). The power remains on.



To rewind the tape to its beginning and to playback automatically (Auto Playback Function)

In the main menu, press ▲+ or ▼- to select SET UP during playback or stop mode and then press RETURN. And press ▲+ or ▼- to select AUTO REPEAT and then press RETURN. By using ▲+ or ▼-, select AUTO REPEAT to ON.

Variable Speed Playback

You can enjoy playing back pictures in variable speeds on the VCR.

Still Picture

During playback mode, press PAUSE ||. To resume normal playback, press PLAY ► or PAUSE ||.

Notes

- No sound accompanies the picture, which may be unstable or have video "noise" in it. This is normal.
- If the VCR is left in the pause mode for more than about 5 minutes, the VIDEO TV will be in playback mode automatically.

Playing Back a Video Tape

To see a slow motion (Slow Picture)

Press -SLOW+ during playing back.

To advance the picture frame by frame (Frame Picture)

Press FRAME **II** during Still Picture.

To advance the tape rapidly

While the tape is being played back, pressing FAST FORWARD **▶▶** will move the tape forward at high speed so you can see the picture and choose where to stop. When you do this, **[▶▶]** appears on the screen.

If you release the button, the VCR will return to normal playback.

When tape is not being played back and the VCR is in the stop mode, pressing FAST FORWARD **▶▶** winds the tape forward at very high speed without displaying the picture.

When you do this, **▶▶** appears on the screen.

You can stop the forward running of the tape at any time by pressing STOP **■**.

If during the operation, the tape rewinds forward to the end, the machine will automatically stop and then rewind the tape back to the beginning again.

By pressing X2, you can now run through a tape at twice normal speed to find the exact place you want. Revert to normal speed by pressing PLAY **▶**.

To rewind the tape rapidly

If you press REWIND/REVIEW **◀◀** while the tape is being played back, you can play the tape backwards to find a particular spot. When you do this, **[◀◀]** appears on the screen and the tape will be rewound at very high speed.

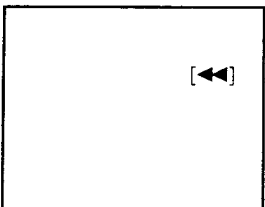
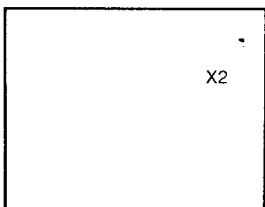
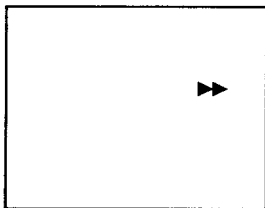
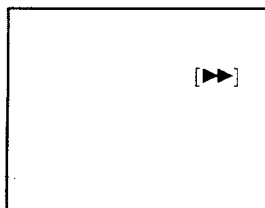
At the end, STOP appears on the screen and invite you to press PLAY **▶**.

Viewing TV Programs During Tape Playback

While a tape is being played, you can switch to watching TV broadcasts.

Press STOP **■**.

The VIDEO TV returns to normal TV reception mode.

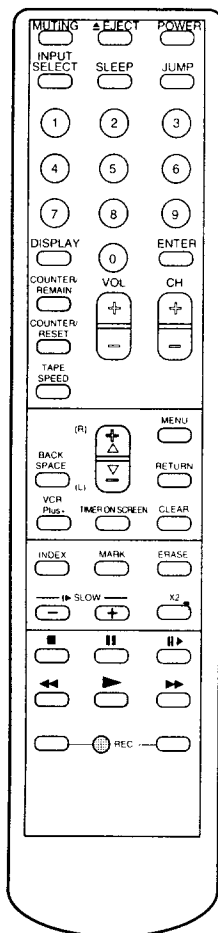




Playing Back a Tape Recorded on Another VCR

When playing back a tape recorded on another VCR, there might be some picture noise.

Tracking ensures that the tape is correctly aligned with the playback head. It only works in the "playback" mode and its principle purpose is to minimize picture shake and what is called "noise" (fuzzy lines across the picture during playback and still picture).



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It is adjusted either automatically or manually.

Automatic tracking adjustment function

When playback starts, the auto tracking automatically adjusts the picture. "AUTO TRACKING" flashes for 5 seconds.

The automatic tracking control is activated in the following conditions:

- When the cassette is inserted for the first time.
- When the recording mode on the playback tape is switched from SP to EP and back again.
- When the picture is distorted by scratches on the tape.
- When TRACKING AUTO:ON is selected in the Tracking menu after the picture is adjusted automatically.

If auto tracking does not work, the tracking was probably last adjusted manually.

Adjusting the tracking manually during playback

When the playback picture proves to have streaks or snow during normal playback, Still picture or Slow picture, adjust the picture manually using the Tracking menu. Press either $\Delta+$ or $\nabla-$ to select TRACKING ADJUST in Tracking menu to obtain the best possible picture. Press RETURN and adjust by pressing $\Delta+$ or $\nabla-$. When playing back a tape recorded on another VCR, the tracking condition is automatically adjusted on this VCR.

Notes

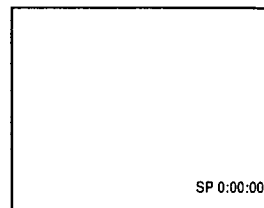
- Auto tracking adjustment may be impossible when the recording condition of the tape is poor.
- During auto tracking adjustment, streaks or noise may appear.

Playing Back a Video Tape

Using COUNTER/REMAIN

To display the counter, press COUNTER /REMAIN once.

The tape counter shows the tape travel time in hours, minutes and seconds during recording or playback.



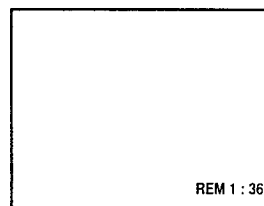
Note

For seeing the remaining tape time, first check the tape mode.

If you want to see the remaining tape time in T-120, press RETURN then Δ + or ∇ - until T-120 appears in TAPE REMAIN screen. For OTHERS, press the button until OTHERS appears.

To see the remaining tape time during recording or playback, press COUNTER/REMAIN twice.

The remaining tape time appears with "REM."



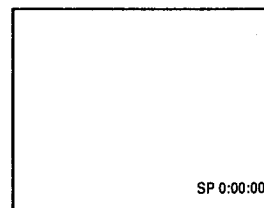
Using Counter Memory Function

The counter memory makes it easy to return to a particular spot on the tape after recording or playback. The tape stops when the counter reaches SP 0:00:00. This feature is especially helpful when editing a recording.

1 Press COUNTER/REMAIN to see the counter.

2 Start recording or playback, and press COUNTER RESET at the point you want to return to.

The counter displays SP 0:00:00.



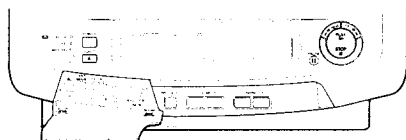
3 Press STOP ■ when you finish recording or playing the tape.

4 Press REWIND/REVIEW ◀◀.

The tape stops at SP 0:00:00.

5 Press PLAY ▶ to play the tape.

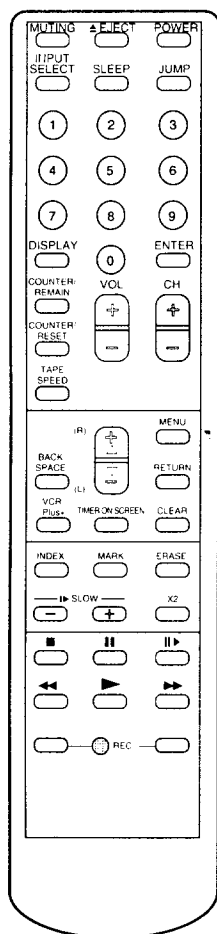
Recording TV Programs



Recording TV Programs

Caution

Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission and/or program owner.



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- 1** Insert a cassette with the safety tab.
The VIDEO TV turns on automatically (Auto power on).
- 2** Select the recording tape speed, SP or EP, with TAPE SPEED.
- 3** Select the channel to be recorded with CH +/- or 0-9 buttons.
- 4** Press the two REC buttons on the Commander at the same time, or the REC button on the unit.
The REC indicator lights.

To stop recording

Press STOP ■.

Temporarily to stop recording at a particular point

Press PAUSE || to eliminate unwanted station breaks or program material while recording a TV program.

REC || appears on the screen.

To resume recording, press PAUSE || again.

When the recording pause mode lasts for more than approximately 5 minutes, the unit enters the stop mode.

Note

When the tape reaches its end

The tape rewinds to the beginning. The power will remain on.

Recording a Program Without Watching the TV

Turn off the power of the TV.

There will be no interference with the recording.

You cannot watch another program while recording one program.

Recording TV Programs using VCR Plus +

VCR Plus+ is a feature in SONY VCRs that simplifies the task of programming the VIDEO TV to make timer recordings.

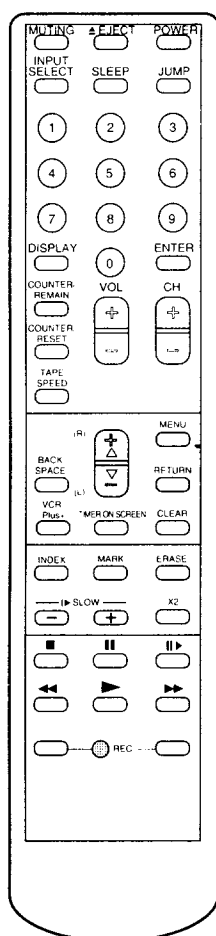
How VCR Plus+ works

Whenever you want to record a TV program, all you need to do is to look up the program's "PlusCode," a number assigned to each program that's published in the TV section of most newspapers, cable TV listings, and even TV GUIDE magazine. Then, just enter the PlusCode of the program you want and the VIDEO TV is automatically programmed to record that show. It's that simple. With VCR Plus+ , you no longer have to go through a lengthy and often repetitive procedure when you set start and stop times, channel numbers, and dates. All this information is automatically sent to your VIDEO TV when you enter the program's PlusCode.

Setting Up VCR Plus +

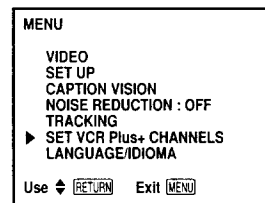
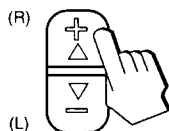
Setting up your VIDEO TV involves coordinating the TV channel number(the number you turn on your set to watch a program) with the guide channel number (the number that's assigned to that channel in your program guide). To get the guide channel numbers, find the "Channel Line-up Chart" in the program guide for your area that features VCR PlusCodes. It usually looks like the example on page 45.

For each channel your VIDEO TV receives, use the Channel Line-up Chart to check that the channel numbers match. For example, if HBO is listed in the Channel Line-up Chart on channel 33, and your VIDEO TV receives HBO on channel 15, you need to coordinate these numbers using the following procedure. For channels in which the numbers are the same (for example, if your VIDEO TV receives HBO on channel 33, and the guide channel number is 33), you can skip this procedure.

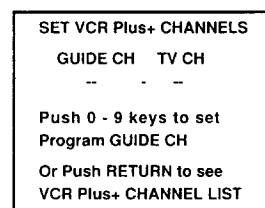


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- 1 In main menu, press Δ + or ∇ - to select SET VCR Plus+ CHANNELS.

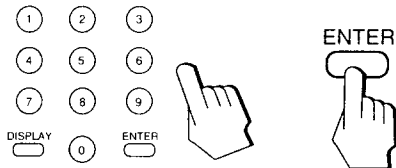


- 2 Press RETURN
The SET VCR Plus+ Channels screen appears and the GUIDE CH is highlighted.



3 Press 0-9 to enter the channel number assigned in the program guide and press ENTER.

The TV CH is highlighted.



SET VCR Plus+ CHANNELS

GUIDE CH TV CH

25 - 25

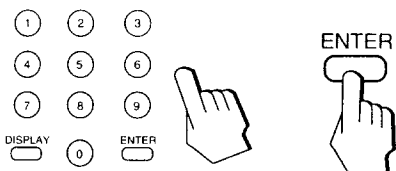
Push 0 - 9 keys to set your TV CH

Then push ENTER

Example of "PlusCode"

		PlusCode
5:30	14 MOVIE - Musical (2hrs.)	33044
	2 SPORTS - Golf (1hr. 25min.)	42060
	CNN WS 9974	
6:30	2 3 4 DRAMA-Comedy(2hrs.)	17390
	5 SCIENCE AND TECHNOLOGY	
	(1hr.15min.)	73457

4 Press 0-9 to enter the actual number on your VIDEO TV channel.



SET VCR Plus+ CHANNELS

GUIDE CH TV CH

25 - 25

Push 0 - 9 keys to set program GUIDE CH

Or Push RETURN to see VCR Plus+ CHANNEL LIST

SET VCR Plus+ CHANNELS

GUIDE CH TV CH

25 - 10

Push 0 - 9 keys to set your TV CH

Or Push RETURN to see VCR Plus+ CHANNEL LIST

Example of "Channel Line-up Chart"

CABLE CH	CABLE TV	VCR Plus+ GUIDE CH
16	AMC American Movie Classics	35
17	BRV Bravo (program grid only)	54
20	CNN Cable News Network	42
21	CSP C-SPAN	28
22	DIS The Disney Channel	53
25	DSC The Discovery Channel	37
34	ESN ESPN	34
35	FAM The Family Channel	47
5	HBO Home Box Office	33
27	LIF Lifetime	46
29	MAX Cinemax	45
30	MTV Music Television	48
31	NIK Nickelodeon	38
38	SC Sports Channel	59
39	SCA Sports Channel America	70
45	SHO Showtime	41
17	TBS TBS SuperStation	43
44	TMC The Movie Channel	58
49	TNN The Nashville Network	49
50	TNT Turner Network Television	52
51	USA USA Network	44

5 Repeat steps 3-4 for each channel whose numbers don't match.

6 When you have set all channels, press RETURN to confirm your channel settings.



VCR Plus+ CHANNEL LIST

Page 1

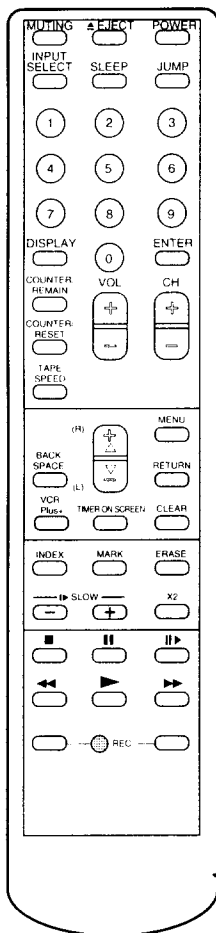
GUIDE TV	GUIDE TV
3 - 15	33 - 18
5 - 22	59 - 3
6 - 17	61 - 47
17 - 55	77 - 35
28 - 9	90 - 8

Use $\uparrow \downarrow$ to change page
Push MENU to Exit

Note

- To return to the normal screen. Press MENU.

Recording TV Programs Using VCR Plus+



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Before you start

- Check that the clock is set correctly.
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- Turn on your VIDEO TV. When using a cable box, turn it on.

Notes

- You cannot set VCR Plus+ in the following cases:
When the VIDEO TV is turned off.
- The timer will not accept setting in the following cases:
When you select Daily for a Saturday and Sunday program.
When you select Daily or Weekly for a program more than seven days ahead.
When you enter the PlusCode of a program that has already ended.
- If the 6 programs have already been preset, "6 PROGRAMS HAVE ALREADY BEEN SET" appears on the screen.

Recording TV Programs

You can preset up to six programs within a one month time frame.

1 Press VCR Plus+ .

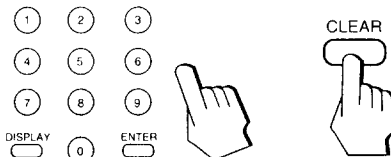


VCR Plus+	1/6 SAT
PlusCode [-----]	TAPE SPEED [AT]

Enter Program's PlusCode using 0-9 keys

To change tape speed push TAPE SPEED

2 Press 0-9 to enter the Plus Code of the program you want to preset. If you've made a mistake, press CLEAR and enter the PlusCode again.



VCR Plus+	1/6 SAT
PlusCode [26854---]	TAPE SPEED [AT]

After entering PlusCode, push RETURN

If you make a mistake, push CLEAR

3 Press TAPE SPEED to select the tape speed, SP, EP or AT.



VCR Plus+	1/6 SAT
PlusCode [26854---]	TAPE SPEED [SP]

Enter Program's PlusCode using 0-9 keys

To change tape speed push TAPE SPEED

4 Press RETURN. The recording information appears on the screen. Check that the information is correct. If it is not, press CLEAR to cancel. To preset another timer setting, repeat steps 1 to 4.

Notes

- When you press TIMER ON SCREEN* after having checked the recording information, the TIMER SET/CHECK menu appears with the recording information of program presetting using VCR Plus+.
- **Once, Daily or Weekly Setting**

Press RETURN to return cursor to the item presetting in TIMER SET/CHECK menu (Then refer to the step 3 on page 48 and Daily/Weekly Recording on page 49).

VCR Plus+	1/6 SAT
PlusCode [26854]	TAPE SPEED [EP]
RECORDING TIME	
DATE	START STOP CH
1/25THU	4:30PM 6:00PM 03EP

To set timer, push POWER
To cancel, Push CLEAR

5 Press POWER to turn off the VIDEO TV. The TIMER REC indicator lights up and the VIDEO TV stands by for recording. When using a cable box, leave it on. The VIDEO TV automatically turns on, records the program and turns off.

Timer Recording



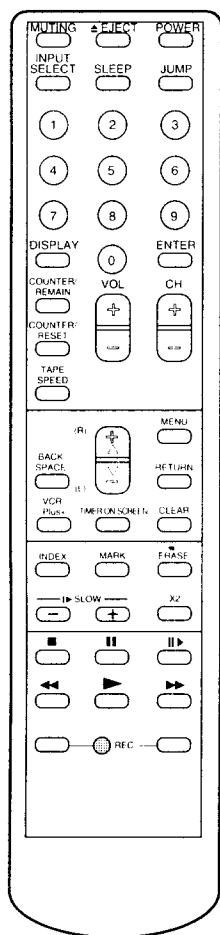
You can preset up to six recordings up to one month in advance. The recordings can be preset with the Commander while referring to the **TIMER SET/CHECK** display on the screen.

Before you begin, check the following points.

- The date and clock must be set correctly. (See "Setting the Clock - AUTO/MANUAL CLOCK SET" on pp. 25-29.)
- Make sure that the cassette tape is long enough to record all the programs.
- Make sure that the safety tab on the cassette is not broken off.

Recording from today to one month later

If today is August 31st, you can set the timer to record a program broadcast between today and September 30 (for 31 days). If today is January 31st, you can set the timer to record a program broadcast between today and February 28th (for 29 days). A leap year is automatically considered.



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Setting the Timer

Example: Suppose you want to record a program broadcast on channel 26 from 9:00 PM on Wednesday January 10 in EP mode. Note that 12:00 AM is midnight and 12:00 PM is noon.

- 1 Press **TIMER ON SCREEN**.
The **TIMER SET/CHECK** screen appears.

TIMER ON SCREEN



TIMER SET/CHECK				1/6 SAT
DATE	START	STOP	CH	
1/10	21:00	23:00	26	---
1/11	---	---	---	---
1/12	---	---	---	---
1/13	---	---	---	---
1/14	---	---	---	---
1/15	---	---	---	---
1/16	---	---	---	---
Use RETURN Exit MENU				

- 2 Press **RETURN**.
Make sure that today's date changes in red.
If not, reset the correct time. See "Setting the Clock - AUTO/MANUAL CLOCK SET" on pp. 25-29.

RETURN

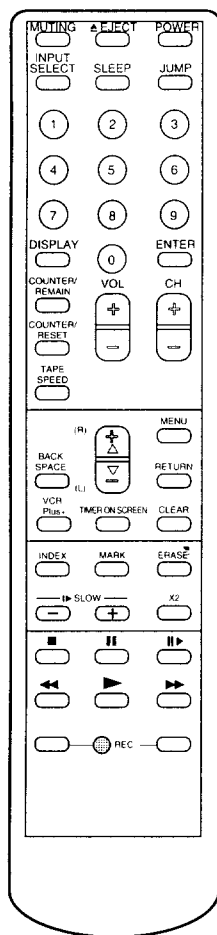


TIMER SET/CHECK				1/6 SAT
DATE	START	STOP	CH	
1/10	21:00	23:00	26	---
1/11	---	---	---	---
1/12	---	---	---	---
1/13	---	---	---	---
1/14	---	---	---	---
1/15	---	---	---	---
1/16	---	---	---	---
Use RETURN Exit MENU				

Note

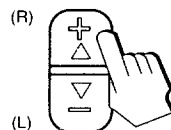
During timer recording, / STAND BY indicator lights.


Timer Recording



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- 3** Press $\Delta+$ or $\nabla-$ to set the month and date to 1/10 WED.
The day of the week is automatically set.



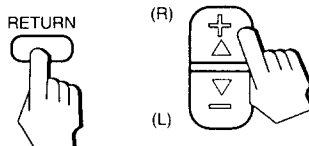
TIMER SET/CHECK		1/6	SAT
DATE	START	STOP	CH
1/10WED	-:--	-:--	--
-/-	-:--	-:--	--
-/-	-:--	-:--	--
-/-	-:--	-:--	--
-/-	-:--	-:--	--
-/-	-:--	-:--	--
-/-	-:--	-:--	--
Use  RETURN Exit MENU			


- 4** Press RETURN to change the hours section under "START" in red then $\Delta+$ or $\nabla-$ until 9 PM appears.



TIMER SET/CHECK		1/6	SAT
DATE	START	STOP	CH
1/10WED	9:--PM	--:--	--
-/-	--:--	--:--	--
-/-	--:--	--:--	--
-/-	--:--	--:--	--
-/-	--:--	--:--	--
-/-	--:--	--:--	--
-/-	--:--	--:--	--
Use  RETURN Exit  MENU			

- 5** Press RETURN to change the minute section under "START" in red then $\Delta+$ or $\nabla-$ until 00 appears.




TIMER SET/CHECK		1/6	SAT
DATE	START	STOP	CH
1/10WED	9:00PM	-:--	--
-/-	-:--	--	--
-/-	-:--	-:--	--
-/-	-:--	-:--	--
-/-	-:--	-:--	--
-/-	-:--	-:--	--
Use  RETURN Exit MENU			

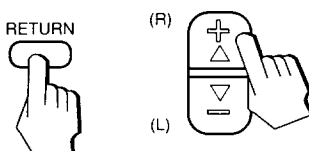
- 6** Press RETURN.
The hours section under "STOP" changes in red. Set the turn-off time referring to steps 4 and 5.




TIMER SET/CHECK		1/6	SAT
DATE	START	STOP	CH
1/10WED	9:00PM	10:55PM	- -
-/-	-:-	-:-	- -
-/-	-:-	-:-	- -
-/-	-:-	-:-	- -
-/-	-:-	-:-	- -
-/-	-:-	-:-	- -

Use  **RETURN** Exit **MENU**

- 7** Press RETURN to change the CH position in red then $\Delta+$ or $\nabla-$ until 26 appears.

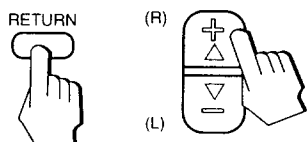


TIMER SET/CHECK			1/6 SAT
DATE	START	STOP	CH
1/10WED	9:00PM	10:55PM	26 -
-/-	-:-	-:-	- -
-/-	-:-	-:-	- -
-/-	-:-	-:-	- -
-/-	-:-	-:-	- -
-/-	-:-	-:-	- -

Use  **RETURN** Exit **MENU**



- 8** Press RETURN to change the recording speed position in red then Δ + or ∇ - until EP appears.



Note

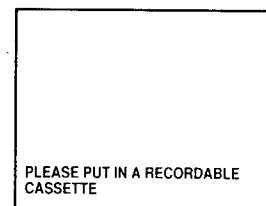
The AT (AUTO SPEED) mode starts recording at the SP speed, but if it determines there isn't enough tape left to complete the programmed recording, it switches to the EP speed.

TIMER SET/CHECK			1/6 SAT
DATE	START	STOP	CH
1/10WED	9:00PM	10:55PM	26EP
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
Use Δ RETURN Exit MENU			

Notes

The following messages under each case appear on the screen:

- "PLEASE PUT IN A RECORDABLE CASSETTE" ---



When switched to stand-by mode for timer recording, if a cassette is not inserted or a cassette without safety tab is inserted.

- "PLEASE PUSH POWER OFF TO SET TIMER"---

When the VIDEO TV is still turned on before the timer recording starts or when SLEEP OFF time and TIMER REC START overlap.

- "PLEASE STOP THE TAPE"---

When TIMER ON SCREEN is pressed at the same time the tape is being played back.

- "VCR IS RECORDING"---

When PLAY, FAST FORWARD, REWIND /REVIEW, EJECT, CH +/-, 0~9 buttons, INPUT SELECT, JUMP or MENU is pressed at the same time the timer recording is being done.

- "TIMER REC STARTS IN 5 MINUTES"---
5 minutes before timer recording starts.

- "PLEASE SET THE CLOCK FIRST"---

When TIMER ON SCREEN is pressed in the condition the current time is not set.

- "VCR is TIMER RECORDING"---

When STOP button is pressed during recording.
The recording is not stopped.

- To stop the Timer Recording
 1. Press TIMER ON SCREEN
TIMER SET/CHECK screen appears.
 2. Press Δ + or ∇ - to select TIMER REC PROGRAM.
 3. Press CLEAR
The program is cleared and the timer recording stops.

- 9** Press RETURN to store the setting.



TIMER SET/CHECK			1/6 SAT
DATE	START	STOP	CH
▶ 1/10WED	9:00PM	10:55PM	26EP
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
-/-	-/-	-/-	-/-
Use Δ RETURN Exit MENU			

- 10** After you finish programming, press POWER to turn off the VIDEO TV.
The **TIMER REC** indicator lights.

To change or correct the setting before completing it
Press BACK SPACE to return to the item to be changed.

To preset another program

Move the cursor to the second line after step 9 and repeat steps 2 to 10.

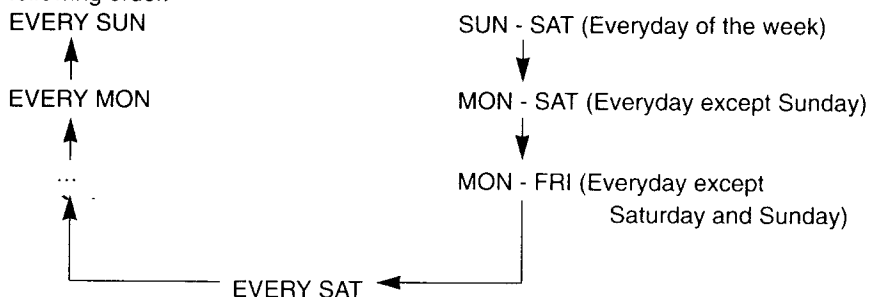
Daily/Weekly Recording

You can preset the timer-activated recording to the same program everyday of the week (Daily recording), or one day of the week(Weekly recording).

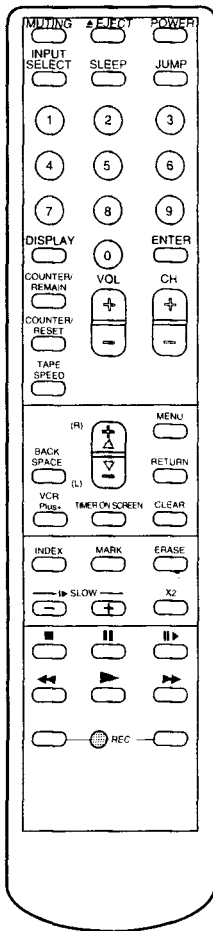
Follow steps 1 through 2 in "Setting the Timer" on page 47.

You can select the following programs.

Each time you press ∇ -, the indication under "DATE" on screen changes in the following order.



Timer Recording

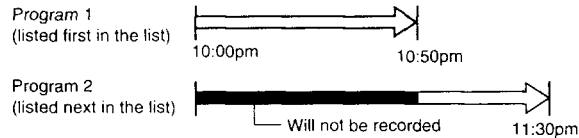


RM-Y138/W

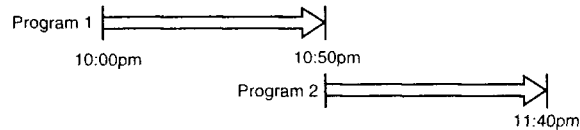
When Preset Timer Recordings Overlap

If the turn-on time of two programs are the same

The program listed first on the TIMER SET/CHECK display has priority over the other programs. The timer recording of lower priority programs will be done from the point after program 1 is finished.

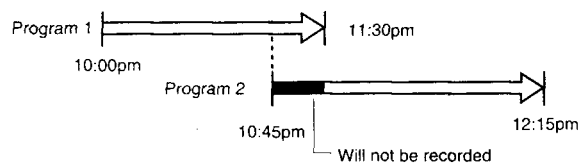


If the recording start time of program 2 is the same as the recording end time of program 1



If the recording start time of program 2 comes before recording of program 1 is over

The recording of program 2 will begin after program 1 is finished.



Note

If a power interruption occurs

- If a power interruption lasting less than approximately three hours occurs while the VCR is waiting for the preset time, the VIDEO TV re-enter the timer recording standby mode.
- If a power interruption lasting more than approximately three hours occurs before a timer recording, the memory clears. Reset the date and time for timer recording.
- If a power interruption lasting less than approximately three hours occurs during a timer recording, the VIDEO TV starts recording again.

If the recording start time of the program is same as the time set with ON/OFF TIMER (pp.30-32)

- The ON/OFF TIMER has priority over the timer recording so that the timer recording will not start. In this case, set the recording start time earlier than ON/OFF TIMER and the timer recording will start.

Checking the Timer Settings

You can display all of the timer settings on the VIDEO TV screen to check the settings.

- 1 Press **TIMER ON SCREEN**.
The **TIMER SET/CHECK** screen appears.

TIMER ON SCREEN



DATE	START	STOP	CH
1/10WED	9:00PM	10:55PM	26EP
1/11THU	1:00PM	2:15PM	10AT
1/12FRI	1:00PM	2:15PM	10SP
MON-FRI	11:00AM	2:15PM	11SP
SUN-SAT	11:00AM	2:15PM	25AT
EVERY-SAT	11:00AM	2:15PM	25AT

Use \blacktriangleleft **RETURN** Exit **MENU**

- 2 Press **TIMER ON SCREEN** again to return to the original screen.

Changing or Cancelling the Timer Settings

The timer settings can be changed or cancelled by referring to the **TIMER SET/CHECK** display.

- 1 Press **TIMER ON SCREEN**.
The **TIMER SET/CHECK** screen appears.

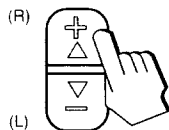
TIMER ON SCREEN



DATE	START	STOP	CH
1/10WED	9:00PM	10:55PM	26EP
1/11THU	1:00PM	2:15PM	10AT
1/12FRI	1:00PM	2:15PM	10SP
MON-FRI	11:00AM	2:15PM	11SP
SUN-SAT	11:00AM	2:15PM	25AT
EVERY-SAT	11:00AM	2:15PM	25AT

Use \blacktriangleleft **RETURN** Exit **MENU**

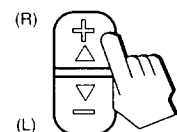
- 2 Press \blacktriangleup or \blacktriangledown to move the cursor to the program you wish to change or cancel.



DATE	START	STOP	CH
1/10WED	9:00PM	10:55PM	26EP
1/11THU	1:00PM	2:15PM	10AT
1/12FRI	1:00PM	2:15PM	10SP
MON-FRI	11:00AM	2:15PM	11SP
SUN-SAT	11:00AM	2:15PM	25AT
EVERY-SAT	11:00AM	2:15PM	25AT

Use \blacktriangleleft **RETURN** Exit **MENU**

- 3 To change it, flash the item to be changed by pressing **BACK SPACE** and make the required changes by pressing \blacktriangleup or \blacktriangledown .



- To cancel it, move the cursor to the item to be cancelled by pressing \blacktriangleup or \blacktriangledown then press **CLEAR**.

- 4 Press **TIMER ON SCREEN** to return to the original screen.

Notes

The **TIMER SET/CHECK** display

- When a recording is set for only one day, that setting is erased from the **TIMER SET/CHECK** display after the recording is over.
- The timer recording programs by using **VCR Plus+** is also displayed in the **TIMER SET/CHECK** on-screen menu.

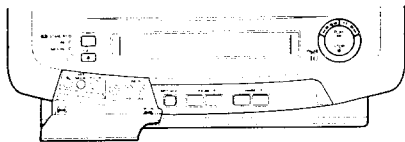
Notes

To stop recording after the timer recording has started

1. Press **POWER** to ON.
2. Press **TIMER ON SCREEN**.
3. Press \blacktriangleup or \blacktriangledown to move the cursor to the program under recording.
4. Press **CLEAR**.
Recording stops.
5. Press **TIMER ON SCREEN** to return to the original screen.

Quick Timer Recording

This function is convenient when, for example, you want to set the VCR to start recording immediately without going through the whole timer setting procedure.



Notes

- Make sure that the clock is set correctly before you activate Quick Timer Recording.
- During Quick Timer Recording, you cannot change the channel on the VIDEO TV.

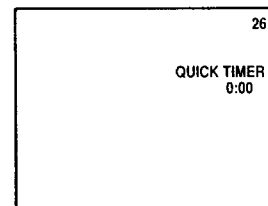
1 Insert a cassette. The VIDEO TV automatically turns on.

2 Press INPUT SELECT so that a channel number appears.
Press TAPE SPEED to select the recording speed, SP or EP.

3 Select the desired channel number with the 0-9 buttons or CHANNEL +/-.
If you try to select the Cable TV channel, first set CABLE to ON in SET UP menu.

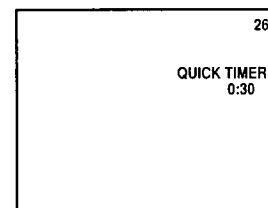
4 Press QUICK TIMER REC on the front panel.

QUICK
TIMER REC



5 Each time you press QUICK TIMER REC, the time length advances in 30-minute increments up to 8 hours.

QUICK
TIMER REC



After you select the desired time length, Quick Timer Recording starts from that point.

Notes

- To extend the Quick Timer Recording time, press QUICK TIMER REC. to advance the recording time in 30-minute increments.
- To clear the Quick Timer Recording setting, press QUICK TIMER REC until time length is 0:00
- If the tape runs out during Quick Timer Recording, recording will stop and the power goes off. The tape will not rewind automatically.
- If a power interruption occurs during Quick Timer Recording, recording will stop and the power goes off. If the power interruption lasts less than three hours and the power is restored before the recording end time, recording will start again from that point.

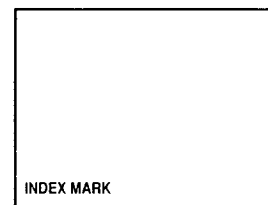


INDEX signal marks on the tape let you scan through the start of different programs or search for a specific section of tape.

Marking INDEX Signals

Automatic INDEX mark

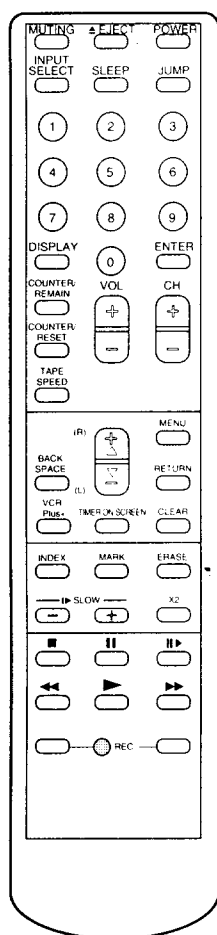
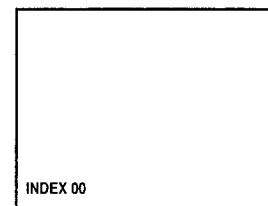
An INDEX signal is automatically marked at the beginning of recording.



Manual INDEX mark

INDEX signals can be marked at any desired point during any recording or normal playback.

Press INDEX once.
INDEX 00 appears.



RM-Y138/W



Then press MARK at the point where you want to mark INDEX signal. INDEX MARK appears on the screen.



Notes

- Leave an interval of more than 2 minutes between INDEX signals when marking them one after the other so that the VCR can detect them correctly.
- While an INDEX signal is being marked during playback, the recorded sound will not be heard, but it will not be erased.
- You cannot mark an INDEX signal in the following cases:
 - On a tape without safety tab.
 - On an unrecorded portion of a tape.
 - Immediately before a point on the tape where the tape speed changes.

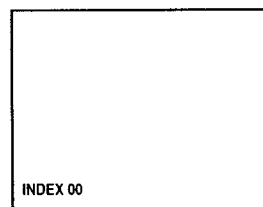
Index Function

Playing Back From the INDEX Point

The beginning of each program can be found and played back by using the INDEX signals.

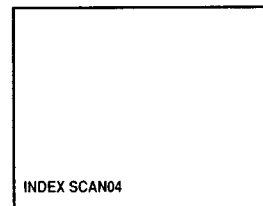
- 1 Insert a cassette with INDEX signals.

- 2 Press INDEX once during playback.
INDEX 00 appears on the screen.

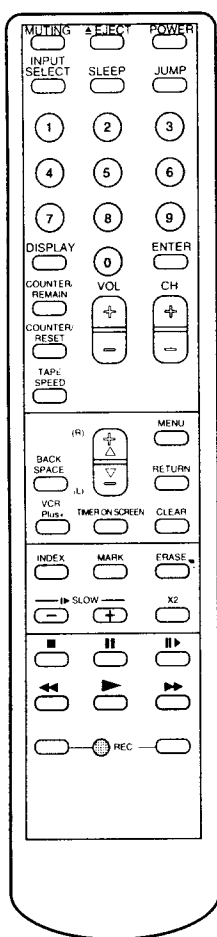


- 3 Press either FAST FORWARD ►► or REWIND/REVIEW ◀◀ to start the INDEX scan. The tape rewinds or rapidly advances to the next marked signal.

The tape plays back for about 5 seconds, then rewinds or rapidly advances to the next INDEX signal. Each time INDEX signal is detected and playback begins, the INDEX scan number (INDEX SCAN 04) appears.



- 4 When the desired program is detected, press PLAY ►.



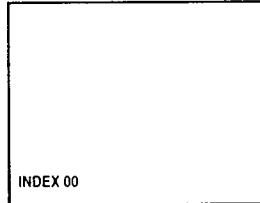
RM-Y138/W

Locating the Desired Program (INDEX Search)

A particular program can be located and played back by designating how many INDEX signals ahead or behind that program is from the current position.

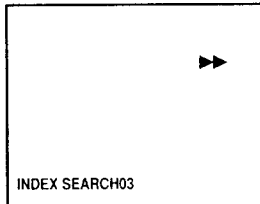
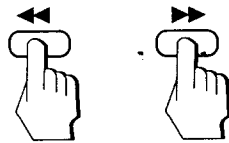
- 1 Insert a cassette with INDEX signals.

- 2 Press INDEX.
INDEX 00 appears.



- 3 Using the 0-9 buttons, enter the number of INDEX signals you want to skip.
For example, if the tape is at INDEX 02 and you want to locate INDEX 05, press 0 3.
You can select maximum location by INDEX 99.

- 4 Press either FAST FORWARD ►► or REWIND / REVIEW ◀◀.
INDEX SEARCH03 appears on the screen. When the desired signal is found, playback begins automatically.

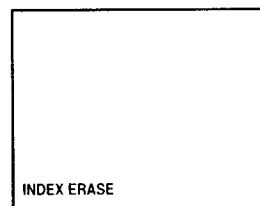


Erasing INDEX Signals

You can erase unnecessary INDEX signals.

- 1 Press INDEX during STOP mode.
INDEX 00 appears.

- 2 Press ERASE.
INDEX ERASE appears on the screen.



- 3 Press either FAST FORWARD ►► or REWIND / REVIEW ◀◀.
The first subsequent INDEX signal is erased and the tape begins playback.

Note

While INDEX signal is being erased, the recorded sound is temporarily muted.

Specification

Television system	American TV standard	Power consumption	KV-13VM30/31: 86W KV-20VM30: 108W
Recording system	Rotary four-head helical scan system	Dimensions (WHD)	KV-13VM30/31: 15" X 16" X 15 ^{1/5} " 382 X 407 X 411mm KV-20VM30: 20 ^{1/2} " X 20 ^{1/2} " X 18 ^{3/5} " 522 X 522 X 474mm
Channel coverage	VHF: 2 - 13 UHF: 14-69 Cable TV: 1-125	Weight	KV-13VM30/31: Net: 13.76 kg(30.3 lbs) Gross: 15.62 kg(34.4 lbs) KV-20VM30: Net: 26.1kg(58lbs) Gross: 30kg(66.1lbs)
Picture tube	KV-13VM30/31: Microblack™ Trinitron® tube 13-inch picture measured diagonally 14-inch picture tube measured diagonally KV-20VM30: Trinitron® Tube 20-inch picture measured diagonally 21-inch picture tube measured diagonally	Tape Speed	SP: 33.35 mm/sec. EP: 11.12 mm/sec.
Antenna	75-ohm external antenna terminal for VHF/UHF	Maximum recording/playback time	8 hours in EP mode
LINE IN	VIDEO IN (phono jack) 2 each (Front/Rear) Input signal: 1 Vp-p, 75 ohms, unbalanced, sync negative AUDIO IN (phono jack) 2 each (Front/Rear) Input level: 400 mVrms Input impedance: 47 kilohms	Fast-forward and rewind time	Approx. 4 min. 30 sec. (T-120 tape)
Power requirements	120V AC, 60 Hz	Supplied accessories	Remote commander RM-Y138: KV-20VM30 KV-13VM30 RM-Y138W: KV-13VM31 1 size AA (R6) battery (1) Antenna Adapter (1)

Note

Design and specifications are subject to change without notice.



If you have a problem with the VIDEO TV, first check the power cord connection, then go through the following list. Should the difficulty persist, unplug the unit, and contact your Sony dealer or local authorised Sony service facility.

VIDEO TV RECEPTION

Symptoms	Suggestions
No picture or sound	<ul style="list-style-type: none"> • Make sure the unit is plugged into a working AC outlet. • Make sure it is not set to LINE IN mode. • Check that POWER is set to ON. • Check the antenna wires, connections and direction.
Picture OK, sound poor	<ul style="list-style-type: none"> • Adjust the sound.
Sound OK, no picture	<ul style="list-style-type: none"> • Try another channel. • Adjust the picture.
Picture weak or blurred	<ul style="list-style-type: none"> • Check the antenna wires, connections and direction. • Adjust picture control.
Picture rolls vertically	<ul style="list-style-type: none"> • Check the antenna wires, connections and direction.
Ghosts (multiple images)	<ul style="list-style-type: none"> • Check the antenna wires, connections and direction. • Install a directional antenna.
Wrong color or no color	<ul style="list-style-type: none"> • Adjust color and hue controls.
No response to button pressing	<ul style="list-style-type: none"> • Press the buttons carefully again. Unplug the set, then plug it in and try again.
No response to remote control	<ul style="list-style-type: none"> • Check the polarity (+ and -) of the batteries. • Replace the batteries.

Troubleshooting

VCR OPERATION

Symptoms	Suggestions
Cannot load video cassettes	<ul style="list-style-type: none">• Insert the cassette with the window side up and the safety tab facing you.• Check if a video tape is already in the VCR.
No operation when buttons are pressed	<ul style="list-style-type: none">• Cancel the Quick Timer Recording.
Auto play function doesn't work or TV programs can't be recorded	<ul style="list-style-type: none">• Make sure that the receiving channel of the set is properly tuned.• Make sure that the safety tab on the video cassette tape is still intact.• Check antenna wires, connections and direction.
Timer recording can't be performed	<ul style="list-style-type: none">• Make sure the recording start/stop time is correct.• Reconnect the power plug to an AC outlet, and reset the program recordings.
There is no picture in playback, or the playback picture is noisy or contains streaks	<ul style="list-style-type: none">• Check that power is set to ON.• Check that the video cassette tape has a recorded program.• Check the tracking control (for noise streaks)
Video cassette tape was inserted incorrectly	<ul style="list-style-type: none">• Wait a few seconds. The video cassette tape should eject itself.

Trinitron® Color Video TV

Operating Instructions

Before operating your VIDEO TV, please read this manual thoroughly and retain it for future reference.

KV-13VM30/31
KV-20VM30

VHS

VCR *plus*

Owner's Record

The model and serial numbers are located at the rear of the VIDEO TV. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____

Contents

Preface

This section tells you about special features, safety information, and preparatory information for using this manual.

Chapter 1: Setting UP

This section shows you the steps necessary for installing and presetting your VIDEO TV, and how to connect optional video and audio equipment.

Chapter 2: Using Basic VIDEO TV Features

This section gives you basic information about operating and adjusting your VIDEO TV.

Chapter 3: Using Advanced TV Features

This section shows you the steps for other useful TV features with using the On-Screen Menus.

Chapter 4: Using Basic VCR Features

This section gives you basic information about operating and adjusting your VCR.

Chapter 5: Using advanced VCR Features

This section shows you the steps for other useful VCR features with using the On-Screen Menus.

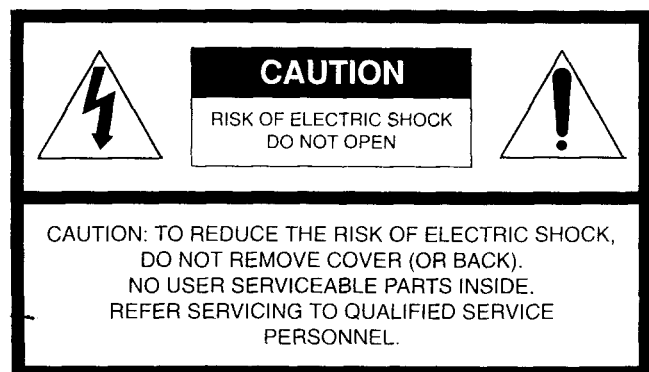
Appendix

This section gives you specifications and troubleshooting information.

- For a detailed table of contents, see p. 3.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

CAUTION:

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

When using TV games, computers, and similar products with your VIDEO TV, keep the brightness and contrast functions at low settings. If a fixed (non-moving) pattern is left on the screen for long periods of time at a high brightness or contrast setting, the image can be permanently imprinted onto the screen. These types of imprints are not covered by your warranty because they are the result of misuse.

Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

Use of this VIDEO TV receiver for other private viewing of programs broadcast on VHF or UHF or transmitted by cable companies for the use of the general public may require authorization from the broadcaster/cable company and/or program owner.

Do not use this VIDEO TV if moisture has condensed, such as on its CRT, otherwise it may cause malfunction. In this case, leave the VIDEO TV unused until it gets dry.

Precautions

Safety

- Operate the VIDEO TV only on 120V AC.
- One blade of the plug is wider than the other for safety purposes and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Should any liquid or solid object fall into the cabinet, unplug the VIDEO TV and have it checked by qualified personnel before operating it any further.
- Unplug the VIDEO TV from the wall outlet if you are not to going to use it for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

Installing

- To prevent internal heat build-up, do not block the ventilation openings.
- Do not install the VIDEO TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.

Cleaning

Clean the VIDEO TV with a soft dry cloth. Never use strong solvents such as thinner or benzene, which might damage the finish of the cabinet.

Repacking

Keep the original carton and packing materials to use for safe transport of your VIDEO TV in the future.

If you have any questions or problems concerning your VIDEO TV, please contact your nearest Sony dealer.

This VIDEO TV receiver provides display of television closed captioning in accordance with 15.119 of the FCC rules.

Information

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

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Introducing the Sony Trinitron® Color VIDEO TV

About the manual

- We highly recommend that you read this manual before using your VIDEO TV combined Television and VCR. Keep the manual handy for future reference.
- The instruction in this manual are for the KV-20VM30 and KV-13VM30/31. The KV-20VM30 is used for illustration purposes.

Features

With the following features, you can:

- Watch up to 125 cable channels for a total of 181 possible off-air and cable channels with the **multi-band VHF/UHF/CATV tuner**.
- Enjoy 4 head high quality picture and variable speed playback.
- Set and adjusts the time automatically by using Auto Clock™ set features.
- Quickly and easily preset the VCR to record programs by using VCR plus+* system.
- Call up on-screen menus to set timer-activated functions (Auto clock set, Manual clock set, On/Off Timer, Channel Block set), Cable on/off, AUTO Program, CH Erase/Add, Tape remain, Auto Repeat On/Off by using the **SET UP** feature.
- View the closed caption and the text by using **Caption Vision**.
- Enjoy automatic Playback by automatically playing, a cassette tape that has had its erase-protection tab removed.
- Record programs without using the program recording timer while you are away, by using the **QUICK TIMER**.
- Monitor quickly other Video/Audio sources (such as a camcorder, a video game, etc), by using the **PLAY ON™**.

* VCR plus+ and plus code are trademarks of Gemstar Development Corporation. VCR Plus+ system is manufactured under license from Gemstar Development Corporation.

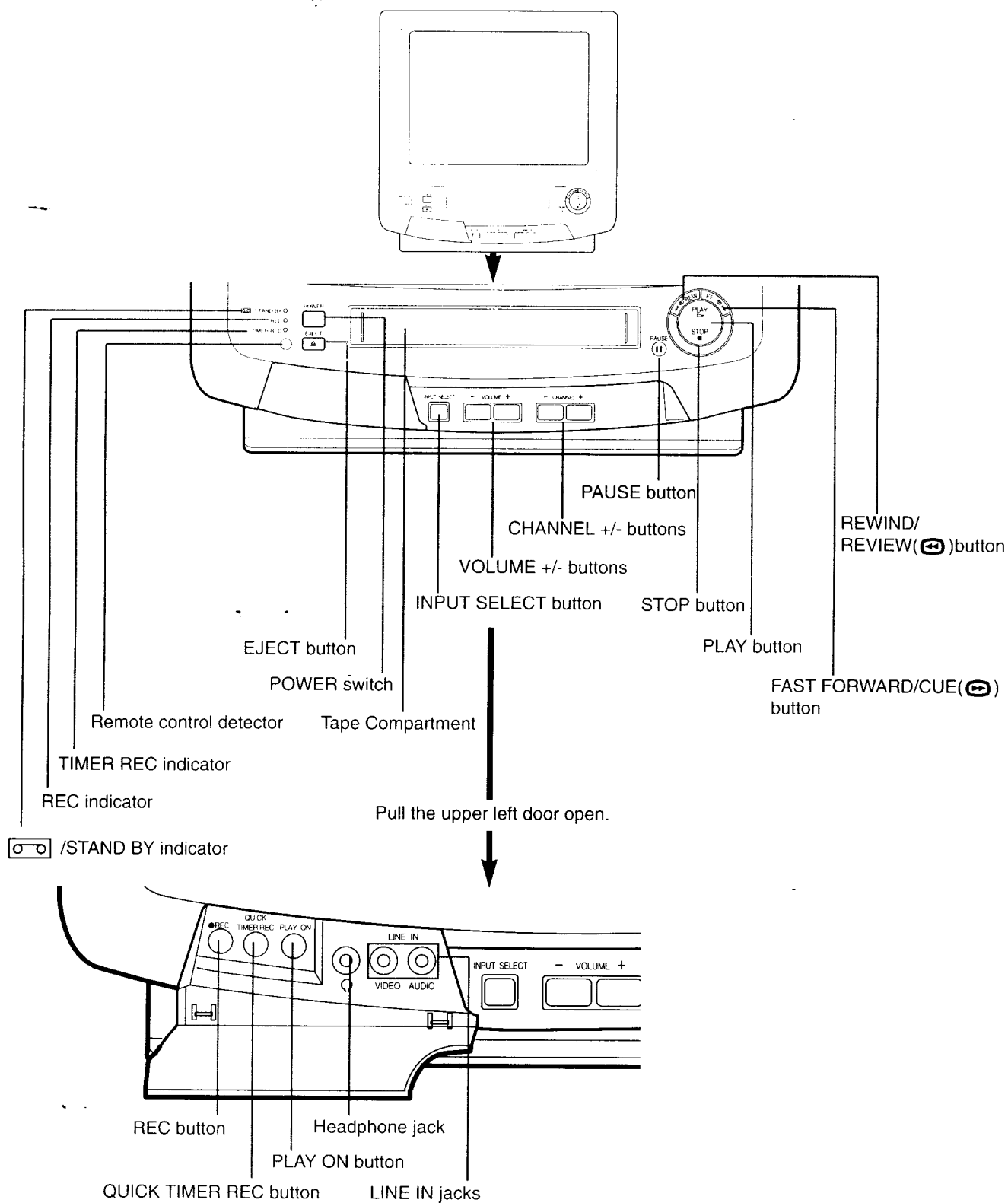
With the supplied Remote Commander, you can:

- Use the **CHANNEL BLOCK** feature, with which picture is blocked and sound is muted, to prevent children from watching unsuitable programs.
- Switch quickly between two channels by using **JUMP**.
- Set the TV to automatically shut off after 30, 60, and 90 minutes by using the **SLEEP** timer.
- Program the VCR to make up easily to six unattended recordings within a 1-month period, including daily and weekly recordings, by using **TIMER ON-SCREEN**.
- View a slow motion during playing back, by pressing **-SLOW+**.
- View a picture frame by frame during PAUSE/STILL picture, by pressing **FRAME**.
- Playback pictures in twice speeds by pressing **X2**.
- View a single frame by using **PAUSE**.
- Make sections of tape so you can quickly and easily return to the section you want to watch, by using **INDEX** and **MARK**.

Locating the Controls



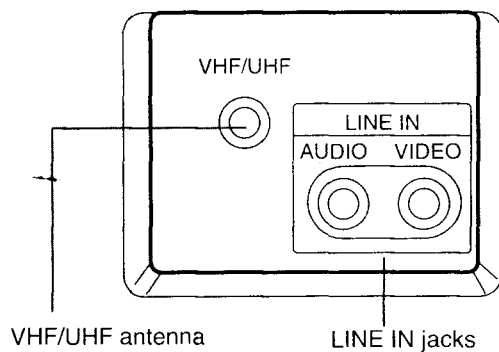
Front Panel



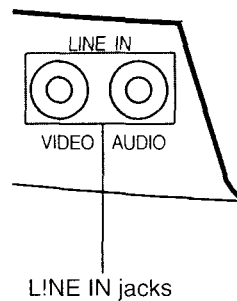
Locating the Controls

Rear and Front Panel

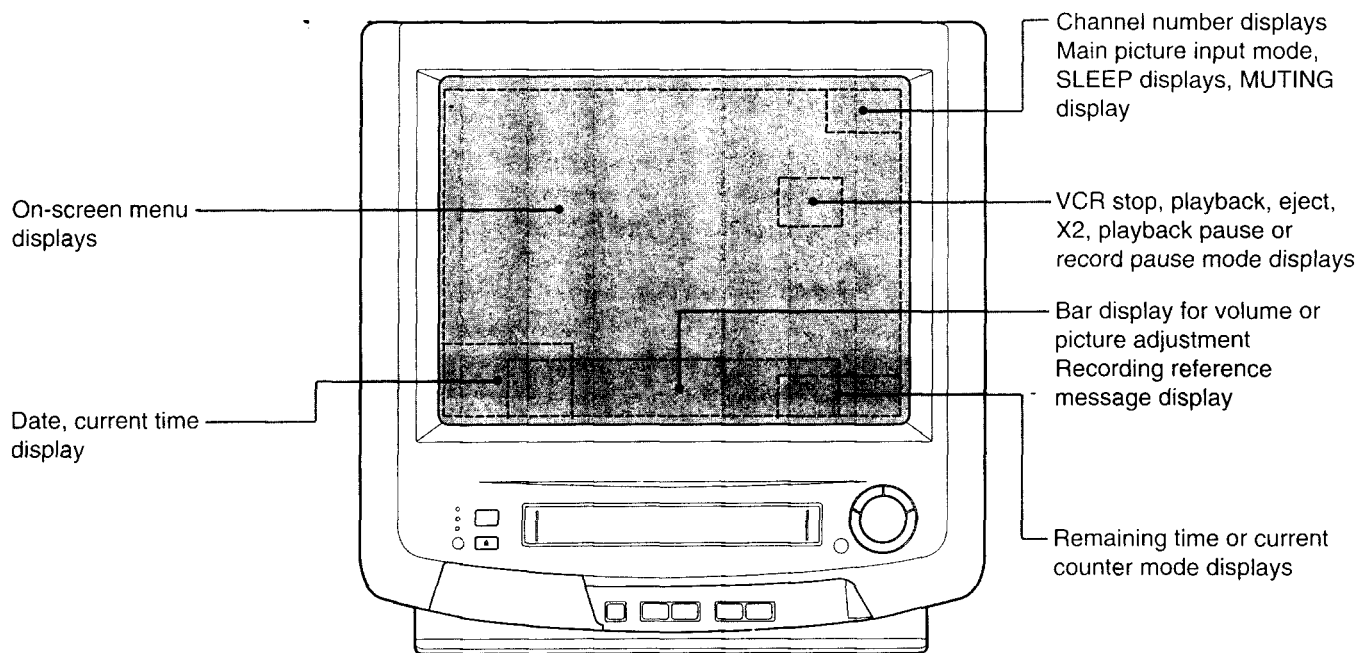
● Rear Panel



● Front Door Inside

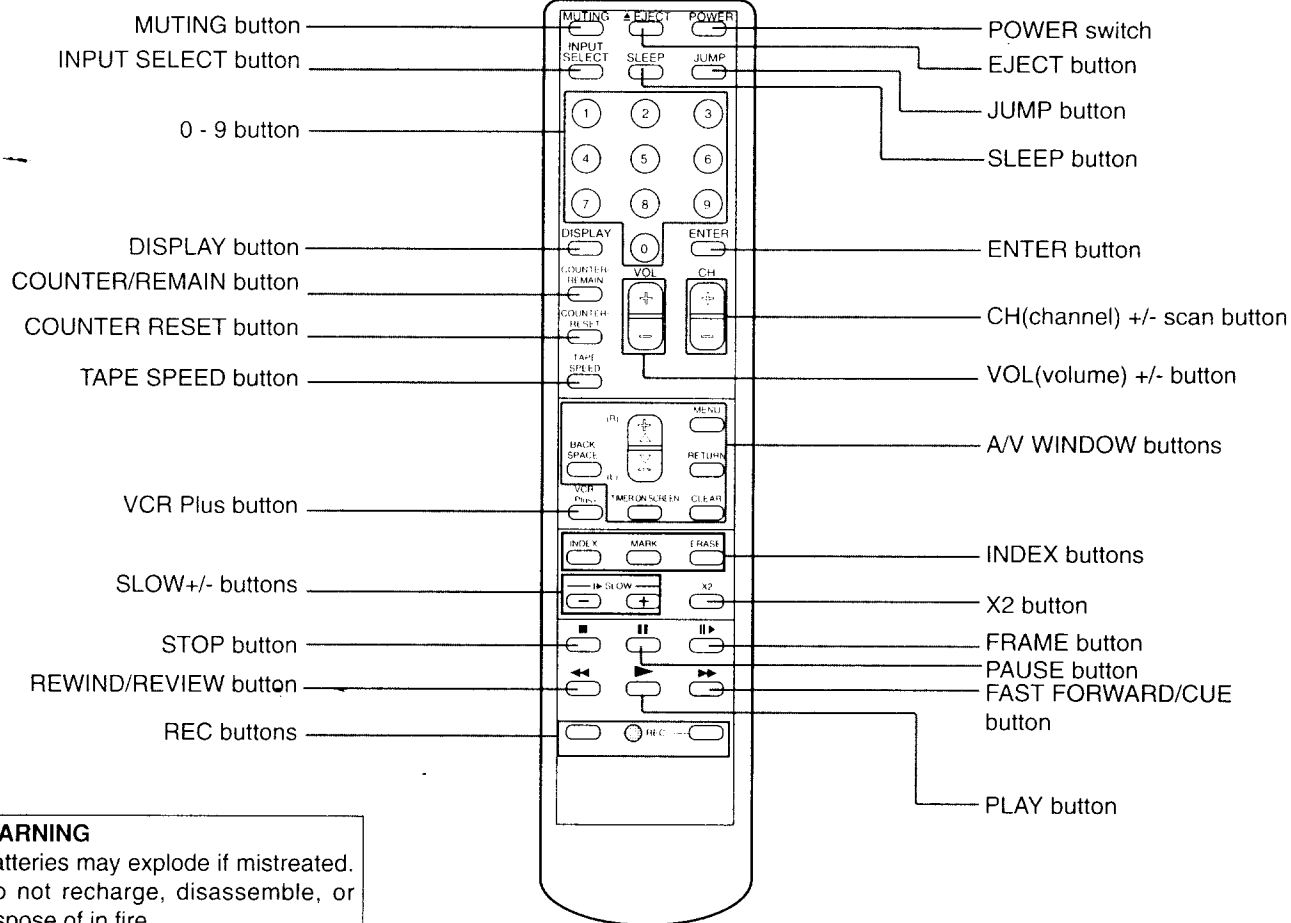


Screen Displays



Remote Commander

RM-Y138/W

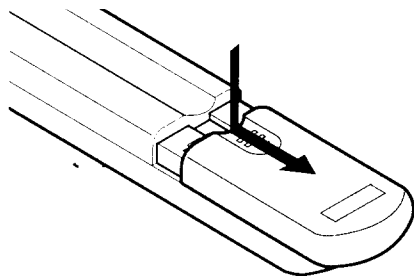


WARNING

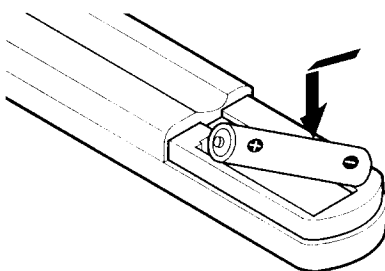
Batteries may explode if mistreated. Do not recharge, disassemble, or dispose of in fire.

Installing Battery

- 1 Remove the battery compartment cover (Rear of commander).



- 2 Insert one AA Battery (R6) being careful of the correct polarity.



Battery life

Under normal operation, the battery will last up to a half of year. If the Remote Commander does not operate properly, the battery might be exhausted. Replace it with new one.

To avoid damage from possible battery leakage

Remove the battery if you do not plan to use the Remote Commander for a fairly long time.

Connecting TV Antenna/Cable

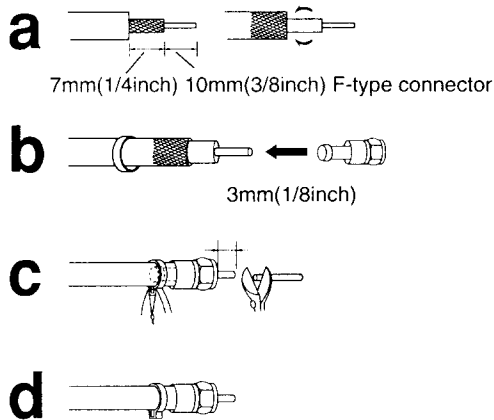
Although you can use either an indoor or outdoor antenna with the VIDEO TV, an outdoor antenna will provide you with better picture quality. You can receive cable TV by connecting a cable supplied by your local cable company.

Connecting VHF, UHF or VHF/UHF Combination Antenna, or CATV Cable

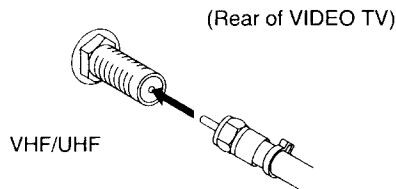
75-ohm coaxial cable (round)

- 1 Check your antenna cable type and prepare the end of the cable using the F-type connector.

Attach an F-type connector (not supplied).



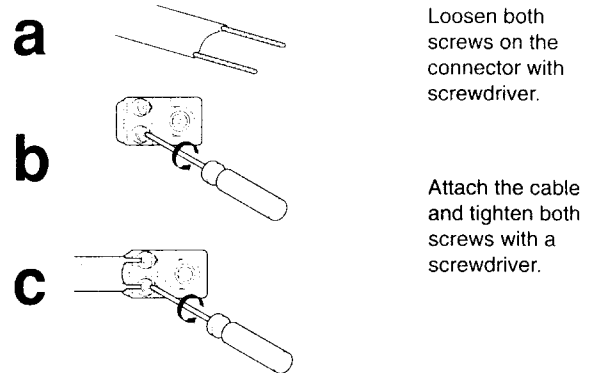
- 2 Plug the connector into the VHF/UHF terminal at the rear of the VIDEO TV.



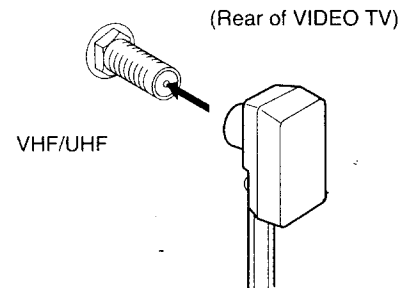
300-ohm twin-lead cable (flat)

- 1 Check your antenna cable type and prepare the end of the cable using the 300-ohm twin-lead cable.

Attach the supplied antenna connector.



- 2 Plug the connector into the VHF/UHF terminal at the rear of the VIDEO TV.

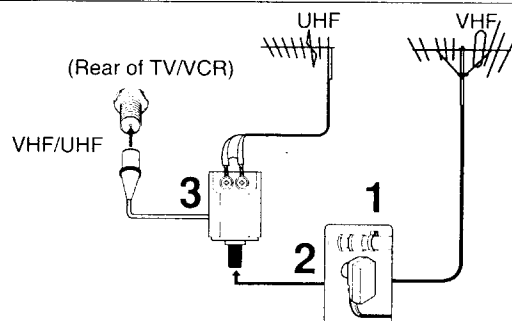


* Most combination antennas are equipped with a signal splitter. Remove the splitter and attach the appropriate connector.

Connecting Both VHF and UHF Antennas

Use the EAC-66 U/V mixer (not supplied).

- 1** Prepare the VHF antenna end using the appropriate connector (p. 8).
- 2** Connect the cables to the mixer.
- 3** Attach the mixer to the VHF/UHF terminal.



When the U/V mixer is used

Snow and noise may appear in the pictures when viewing cable TV channels over 37 (W + 1).

Note

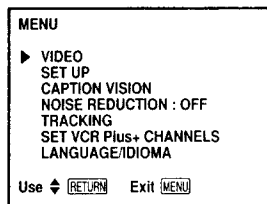
For better picture quality, we would recommend you to connect an outdoor antenna.

Using the On-Screen Menus

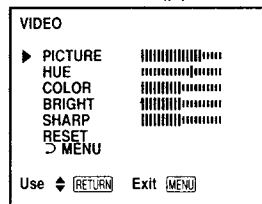
The following flow chart shows the different levels of on-screen menus that you can use to make various adjustments and settings. See the indicated pages for instructions on using each feature.

For picture quality adjustment

Main menu

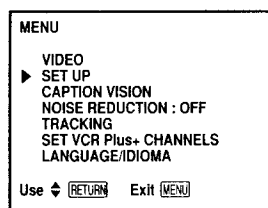


VIDEO menu (pp. 21-22)



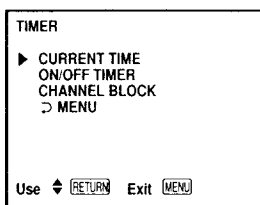
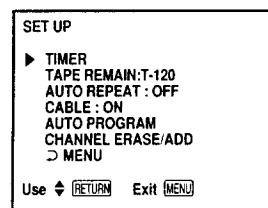
For presetting and other functions

Main menu

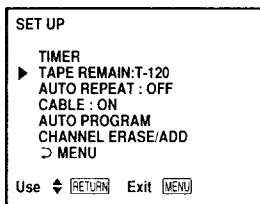


SET UP menu

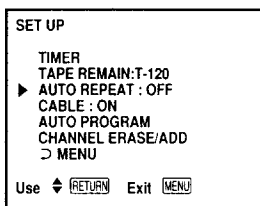
(pp. 12-17, 25-29)



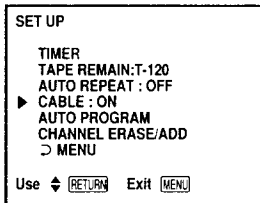
TIMER screen (pp. 25-35)



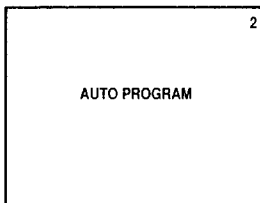
TAPE REMAIN screen (p. 42)



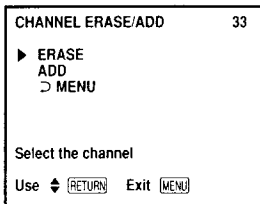
AUTO REPEAT ON/OFF screen (p. 39)



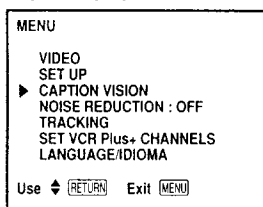
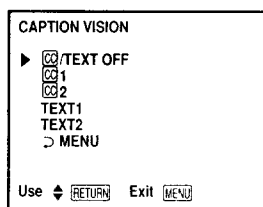
CABLE ON/OFF screen (p. 12)



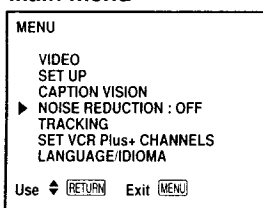
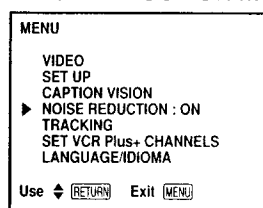
AUTO PROGRAM screen (pp. 13-14)



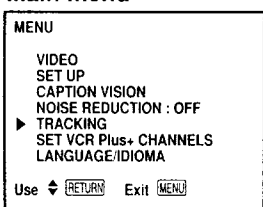
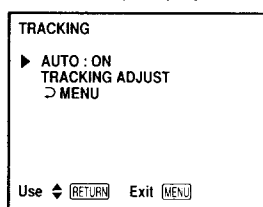
CHANNEL ERASE/ADD screen (pp. 15-17)

For closed caption setting**Main menu****CAPTION VISION menu**

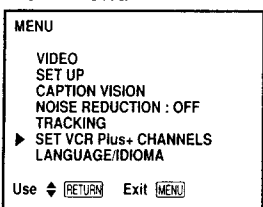
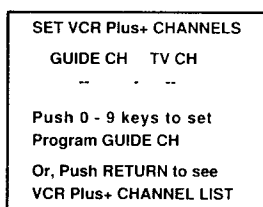
CAPTION VISION screen (p. 23)

For noise reduction function**Main menu****NOISE REDUCTION menu**

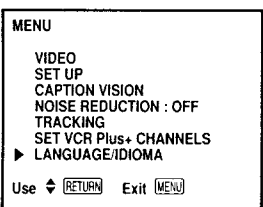
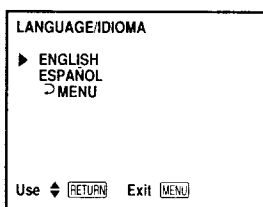
NOISE REDUCTION screen (p. 24)

For tracking adjustment function**Main menu****TRACKING menu**

TRACKING screen (p. 41)

For VCR Plus+ CHANNELS setting**Main menu****SET VCR Plus+ CHANNELS menu**

SET VCR Plus+ CHANNELS screen (p. 44-46)

For on screen language selection function**Main menu****LANGUAGE SELECTION menu****To select the LANGUAGE/IDIOMA**Press Δ + or ∇ - to select the desired language mode. And, press RETURN.**Navigating Through the Menus**

Use the buttons on the remote commander.

To display the main menu

Press MENU.

To return to the normal screen

Press MENU on the Remote Commander.

To return to the previous menuPress Δ + or ∇ - to select MENU.

Then press RETURN.

To return to the main menu

Repeat the above, until you reach the main menu.

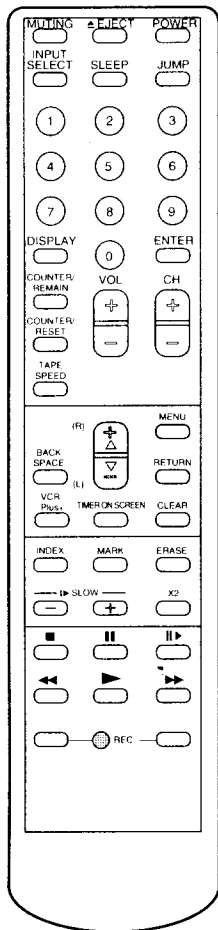
Note

The menus disappear automatically if you do not press a button within 60 seconds.

Turning the Cable Mode On or Off

All of the controls are on the Remote Commander.

If you have cable connected to your VIDEO TV (p. 8-9) follow the steps below to turn the cable connection on or off. CABLE is preset to OFF when you use your VIDEO TV for the first time. Turn CABLE to OFF to preset or watch VHF or UHF channels.

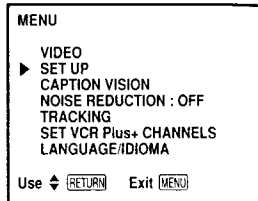
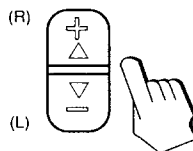


RM-Y138/W

1 Press MENU.

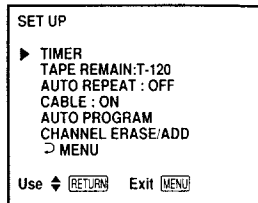
The Main Menu appears

Press Δ + or ∇ - to select SET UP, in main menu.

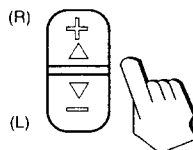


Press RETURN.

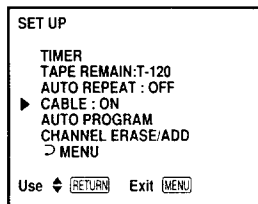
The SET UP menu appears.



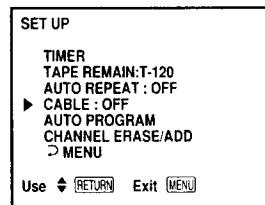
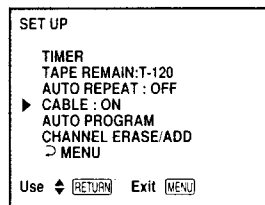
2 Press Δ + or ∇ - to select CABLE.



Press RETURN.



3 Press Δ + or ∇ - to select ON or OFF alternately.



Press RETURN.

The setting is completed.



To return to the normal screen
Press MENU.

Note

If the VIDEO TV is in LINE mode, you cannot select CABLE. Repeatedly press INPUT SELECT to change to TV mode.

Presetting TV Channels

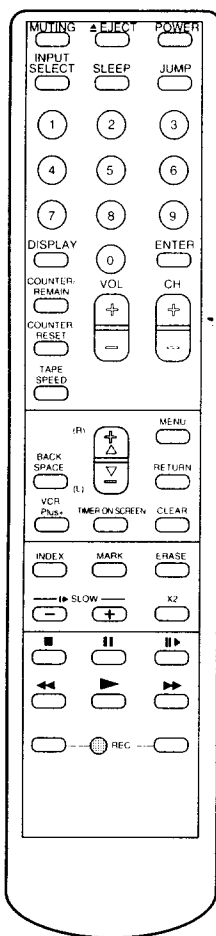
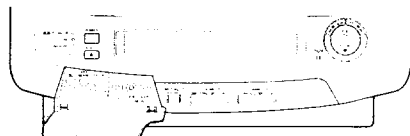


Once you have preset the channels on your VIDEO TV, you will be able to use the channel +/- buttons on the VIDEO TV or the Remote commander to scan the channel you selected.

Presetting TV Channels Automatically

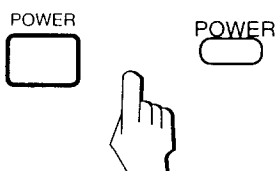
Note

Perform auto programming during the day rather than late at night, when some channels may not be broadcasting.



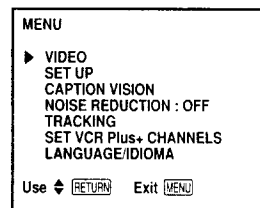
RM-Y138/W

- 1 Press POWER on the VIDEO TV or the Remote Commander to turn the VIDEO TV on.

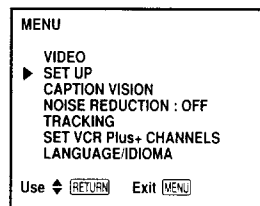
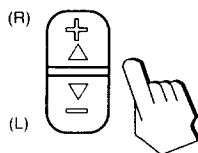


- 2 Using the Menu, select cable off to receive VHF/UHF channel. Select cable on to receive cable stations.
(Follow the steps in "Turning the Cable Mode On or Off", p. 12.)

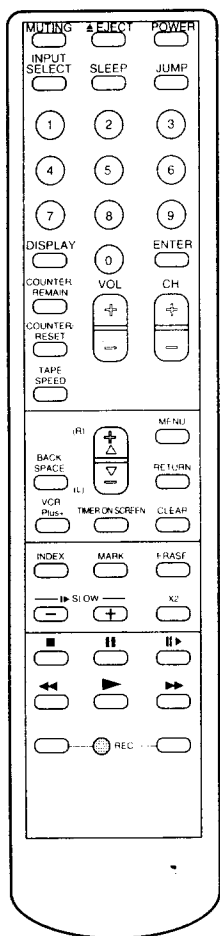
- 3 Press MENU.
The main menu appears.



- 4 Press Δ + or ∇ - to select SET UP.



Presetting TV Channels



RM-Y138/W

Receivable channels for this TV

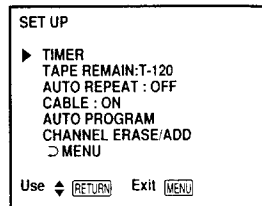
VHF: 2-13
UHF: 14-69
Cable: 1-125

To select TV channels without presetting
Press 0-9.

To return to the normal screen
Press MENU.

To erase unnecessary channels, or to add channels that could not be preset automatically because their signal was too weak, follow the steps in "Erasing Unnecessary Channels CHANNEL ERASE" and "Presetting Only Desired Channels-CHANNEL ADD" (pp. 15-17).

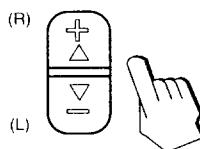
Press RETURN.
The SET UP menu appears.



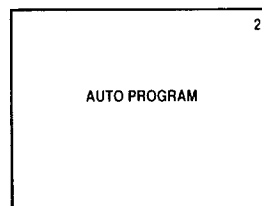
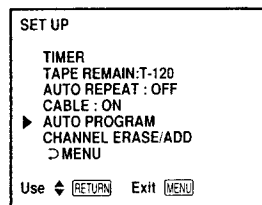
Note

If the VIDEO TV is in LINE mode, you cannot select AUTO PROGRAM. Press INPUT SELECT to change to TV mode.

5 Press Δ + or ∇ - to select AUTO PROGRAM.



Press RETURN.



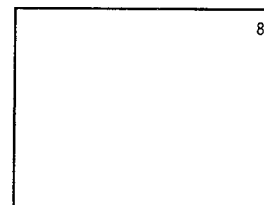
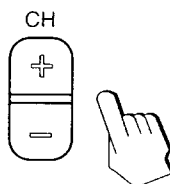
"AUTO PROGRAM" appears on the screen and receivable channels (other than the channels already preset) are preset in numerical sequence. The channels previously preset will not remain in the TV's memory. When no more channels can be found, the programming stops and the lowest numbered channel is displayed.



Erasing Unnecessary Channels - CHANNEL ERASE

Use this feature to erase unnecessary TV channels, so that when you press CH+/-, the channel(s) are skipped.

- 1 Press the CH +/- button to select the channel you want to erase.
For example, to erase channel 8, press CH + or - until 8 appears.



- 2 Press MENU.
The main menu appears.

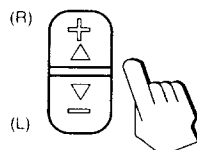


MENU

- ▶ VIDEO
- SET UP
- CAPTION VISION
- NOISE REDUCTION : OFF
- TRACKING
- SET VCR Plus+ CHANNELS
- LANGUAGE/IDIOMA

Use \blacktriangleleft [RETURN] Exit [MENU]

- 3 Press \triangle + or ∇ - to select SET UP.



Press RETURN.
The SET UP menu appears.



MENU

- ▶ VIDEO
- SET UP
- CAPTION VISION
- NOISE REDUCTION : OFF
- TRACKING
- SET VCR Plus+ CHANNELS
- LANGUAGE/IDIOMA

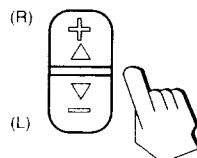
Use \blacktriangleleft [RETURN] Exit [MENU]

SET UP

- ▶ TIMER
- TAPE REMAIN:T-120
- AUTO REPEAT : OFF
- CABLE : ON
- AUTO PROGRAM
- CHANNEL ERASE/ADD
- ▶ MENU

Use \blacktriangleleft [RETURN] Exit [MENU]

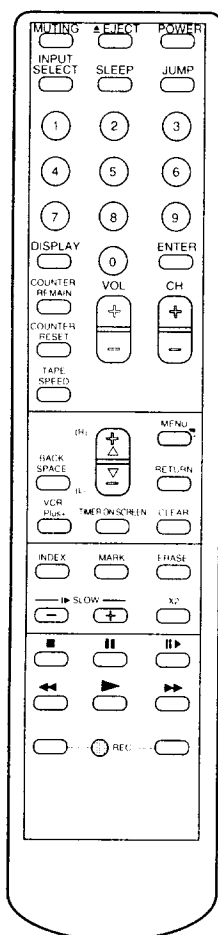
- 4 Press \triangle + or ∇ - to select CHANNEL ERASE/ADD.



SET UP

- TIMER
- TAPE REMAIN:T-120
- AUTO REPEAT : OFF
- CABLE : ON
- AUTO PROGRAM
- ▶ CHANNEL ERASE/ADD
- ▶ MENU

Use \blacktriangleleft [RETURN] Exit [MENU]



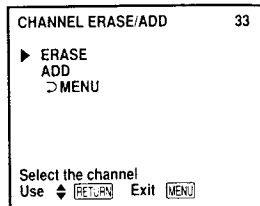
RM-Y138/W

Presetting TV Channels

Press RETURN.

The CHANNEL ERASE/ADD screen appears, and the cursor points to ERASE.

RETURN



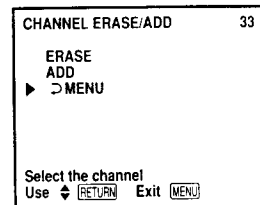
Note

If the VIDEO TV is in LINE mode, you cannot select CHANNEL ERASE/ADD. Press INPUT SELECT to change to TV mode.

5 Press RETURN.

A "-" sign appears in front of the channel number display showing that the channel is erased from the channel scan memory.

RETURN



6 Press MENU.

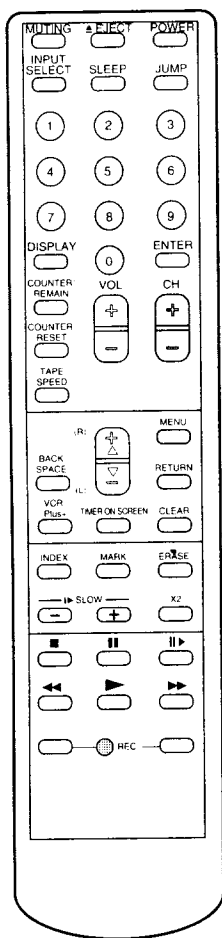
MENU



The next time you press the CH +/- buttons, channel 8 will be skipped.

To erase other channels

Repeat steps 1-6.



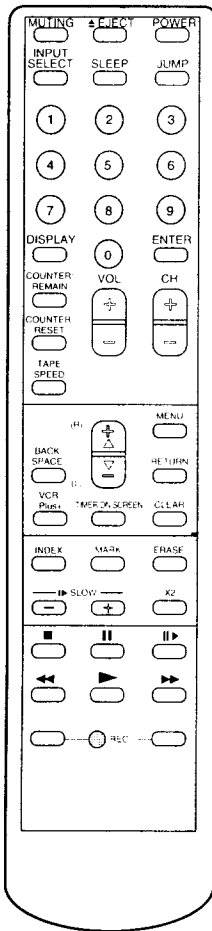
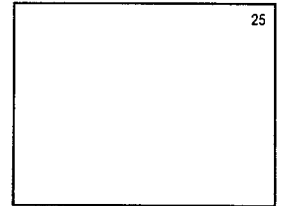
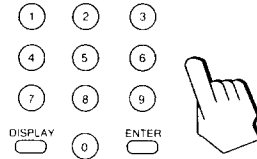
RM-Y138/W

To return to the normal screen
Press MENU.

Presetting Only Desired Channels - CHANNEL ADD

Use this feature to add channels one at a time to the channel scan memory.

- 1 Press 0-9 to select the channel you want to add. For example, to add channel 25, Press 2, 5 and ENTER.



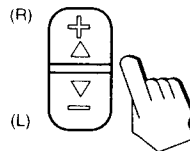
RM-Y138/W

- 2 - 4 (Follow steps 2-4 in "Erasing Unnecessary Channels-CHANNEL ERASE," pp. 15-16)

Note

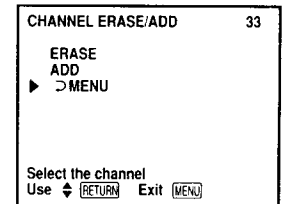
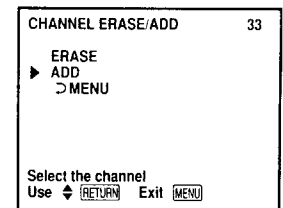
If the TV is in LINE mode, you cannot select CHANNEL ERASE/ADD. Press INPUT SELECT to change to TV mode.

- 5 Press Δ + or ∇ - to select ADD.



Press RETURN.

A "+" sign appears in front of the channel number display showing that the channel is added to the channel scan memory.

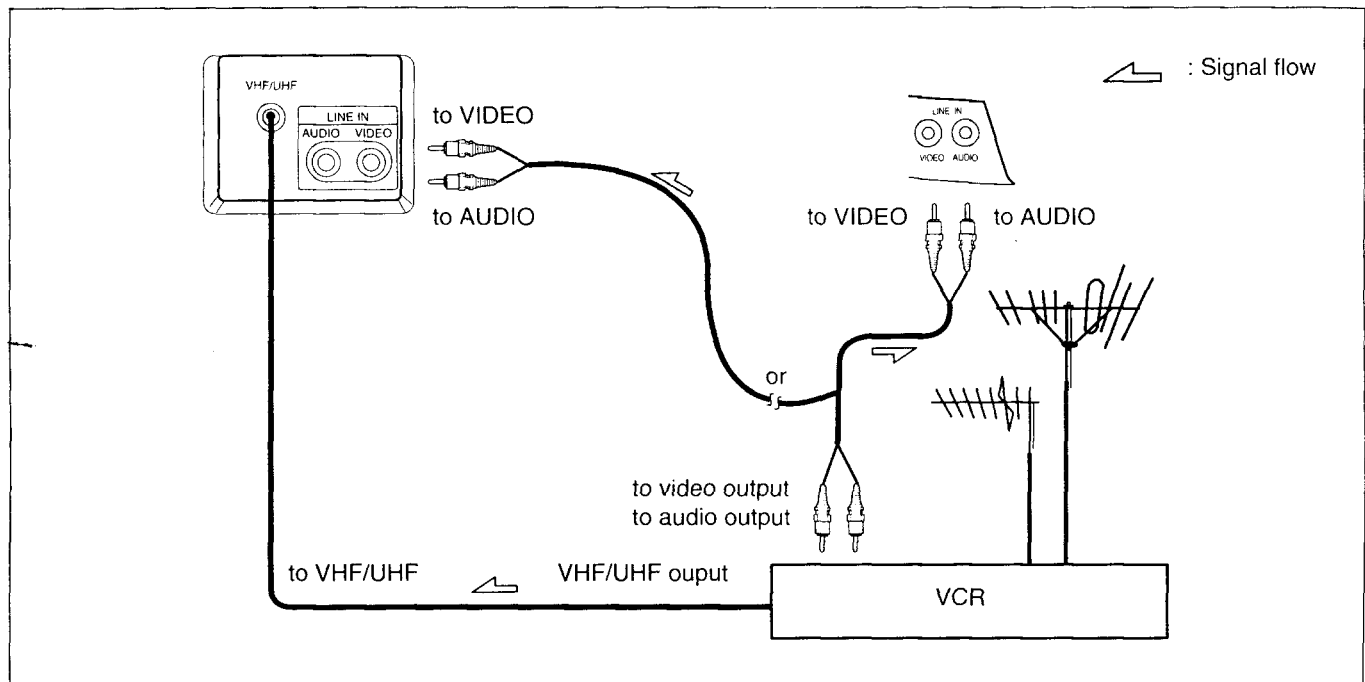


To return to the normal screen
Press MENU.

- 6 Press MENU.

To add other channels
Repeat steps 1-6.

Connecting Other Equipment



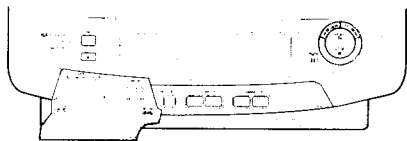
1 Remove the antenna cable from the VIDEO TV Antenna terminal. Connect the antenna cable to the antenna terminal of the other Video/Audio source (ex. Video recorder). Then connect a coaxial cable from the VHF output terminal back to the antenna terminal of the VIDEO TV.

2 To use your VIDEO TV to monitor an audio/video source (such as another VCR, a Camcorder or a Laser Disc Player), connect the audio/video source output jacks to the AUDIO/VIDEO IN jacks on the rear panel or front door of the VIDEO TV. Then select LINE IN using the PLAY ON on the front door.

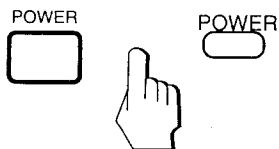
Notes

- Press PLAY ON on the front door of the VIDEO TV so that "LINE" appears on the screen.
- To return to TV mode, repeatedly press INPUT SELECT on the VIDEO TV or on the Remote Commander so that a channel number appears on the screen.
- For operating instructions, refer to the instruction manual furnished with the VCR.
- If the picture or sound is affected, move the VCR away from the VIDEO TV.

Watching TV Programs



- 1 Press POWER on the VIDEO TV or the Remote Commander to turn the TV on.



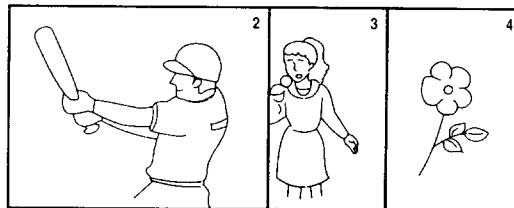
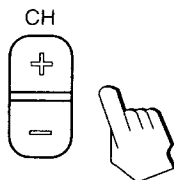
- 2 Turn the cable mode on or off to select the type of channel you want to watch, VHF/UHF or cable TV.
(Follow the steps in "Turning the Cable Mode On or Off," p.12.)

If "LINE" is displayed on the screen, press INPUT SELECT on the Remote Commander so that the channel number appears.

- 3 Select a channel in one of the following two ways:

To scan the preset channels* in numerical sequence

Press CH +/-.



* For more information on presetting channels, see pp. 13-17.

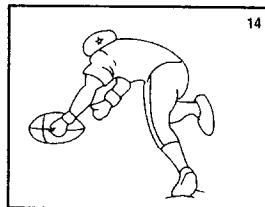
To select a channel directly

Press 0-9.

For example, to select channel 14, press 1 and 4.

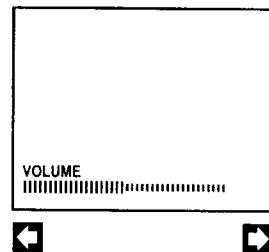
You don't have to press ENTER after having pressed the desired channel number. The channel is directly selected if you do not press ENTER after 3 seconds.

But press ENTER to select a channel quickly.



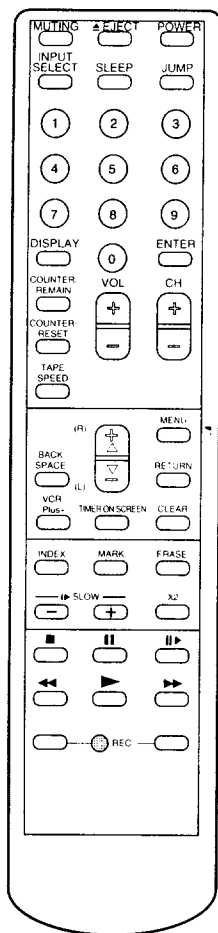
- 4 Press VOL +/- to adjust the volume.

Press VOL + to increase the volume.
Press VOL - to decrease the volume.



To turn off the TV

Press POWER on the TV or the Remote Commander again.



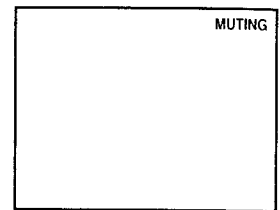
RM-Y138/W

Using Convenient Features

Muting the Sound - MUTING

Press **MUTING**.
The display "MUTING" will appear on the screen.

To restore the sound
Press **MUTING** again.



Keeping the Displays On-Screen - DISPLAY

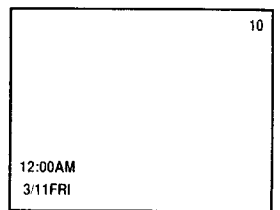
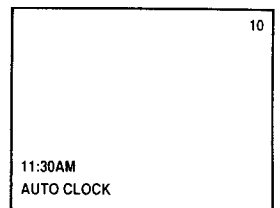
If **AUTO CLOCK** has been set when you turn the **VIDEO** TV on, the display will appear for about 3 seconds as shown right.

To display the channel

Press **DISPLAY**.
All the existing displays appear: channel number, date, time, VCR operating mode and tape counter.

To cancel the display

Press **DISPLAY** again.
The display will disappear.



Setting the Sleep Timer - SLEEP

The sleep timer turns off the TV automatically after the amount of time you select.

Press **SLEEP**.
Each time you press **SLEEP**, the time increments 30, 60, 90 and OFF mode appear in sequence.



	SLEEP OFF
	SLEEP 30
	SLEEP 60
	SLEEP 90

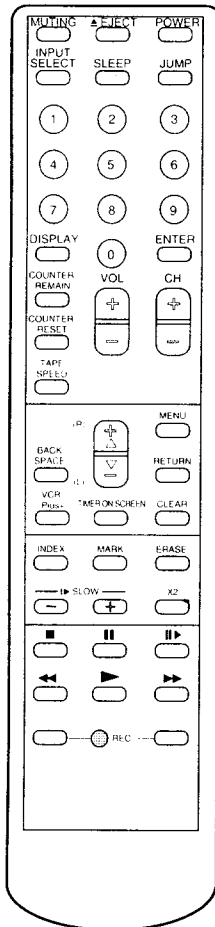
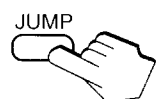
The **SLEEP** display appears about one minute before the TV turns off.

To cancel the setting

Press **SLEEP** until **OFF** mode appears.
The "SLEEP OFF" display appears for about three seconds.
OR
Turn the TV off.
The sleep timer setting is cancelled.

Switching Quickly Between Two Channels - JUMP

Press **JUMP** once to recall the channel you were watching previously. Press **JUMP** again to switch back. Use this feature to keep track of two programs alternately.

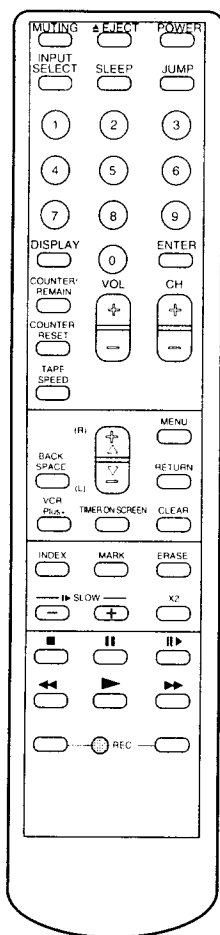


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Adjusting Picture Quality

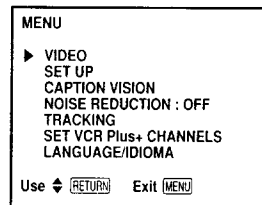


You can adjust the picture for each input mode (TV mode, LINE) by pressing INPUT SELECT to select the input mode before making the adjustments. These adjustments are retained in memory even when you turn off the TV until you change the adjustments again.

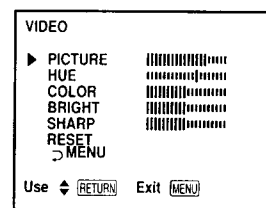


RM-Y138/W

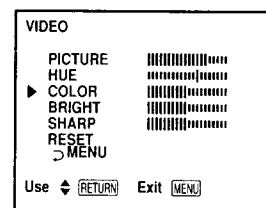
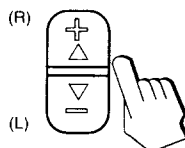
- 1 Press MENU.
The main menu appears, and the cursor points to VIDEO.



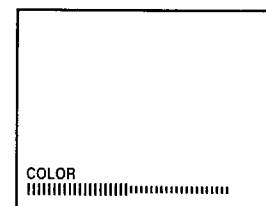
- 2 Press RETURN.
The VIDEO menu appears.



- 3 Press Δ + or ∇ - to select the item you want to adjust.
For example, to adjust the picture color, select COLOR.

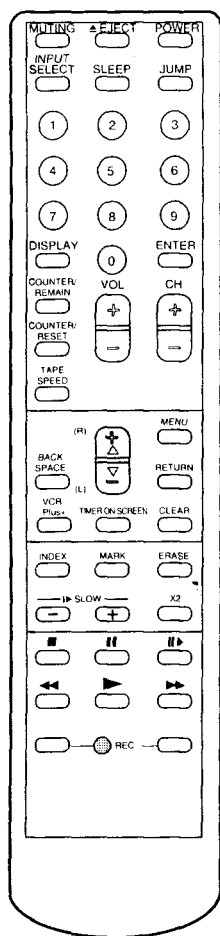


Press RETURN.
The adjustment bar appears.



Adjusting Picture Quality

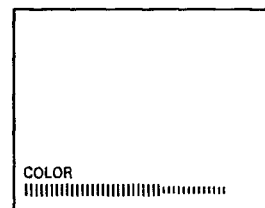
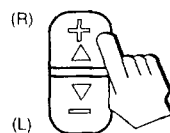
4 Press $\Delta +$ or $\nabla -$ to make the adjustment.



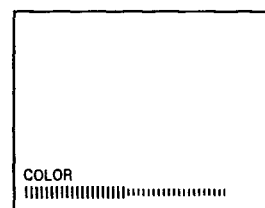
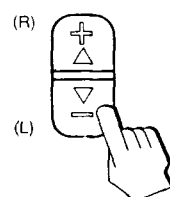
RM-Y138/W

To return to the normal screen
Press MENU.

To restore the factory (mid-level) setting
Go to the VIDEO menu and select RESET by pressing $\Delta +$ or $\nabla -$. Then press RETURN. All the settings except for PICTURE will be restored to mid-level settings.

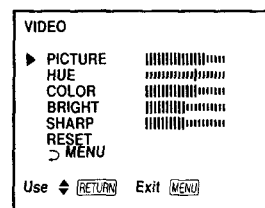


Increase color intensity \blacktriangleright



\blacktriangleleft Decrease color intensity

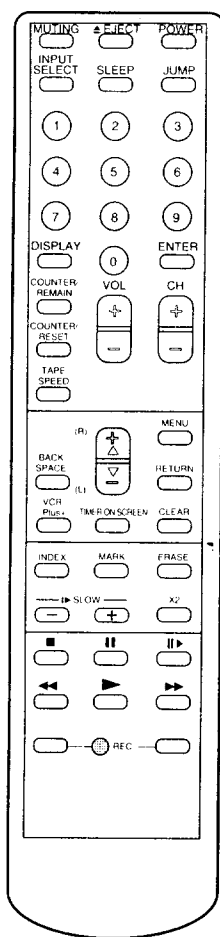
Press RETURN.
The new setting appears in the VIDEO menu.



To adjust other items
Repeat steps 3-4.

	Press $\nabla -$ to :	Press $\Delta +$ to :
PICTURE	decrease picture contrast with soft color	increase picture contrast with vivid color
HUE	make skin tones become purplish	make skin tones become greenish
COLOR	decrease color intensity	increase color intensity
BRIGHT	darken the picture	brighten the picture
SHARP	soften the picture	sharpen the picture

Using Closed Caption



RM-Y138/W

- 1 Press MENU.
The main menu appears.

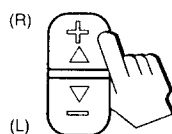


MENU

- ▶ VIDEO
- SET UP
- CAPTION VISION
- NOISE REDUCTION : OFF
- TRACKING
- SET VCR Plus+ CHANNELS
- LANGUAGE/IDIOMA

Use RETURN Exit MENU

- 2 Press or to select CAPTION VISION.
Then press RETURN.
The CAPTION VISION screen appears.



CAPTION VISION

- ▶ /TEXT OFF
- 1
- 2
- TEXT1
- TEXT2
- ▷ MENU

Use RETURN Exit MENU

- 3 Press or to select closed caption mode.

Select CC1 or CC2 to view Captions.
A Caption is a printed version of the dialogue or sound effects of a program. (The mode should be set to CC1 for most programs.)

CAPTION VISION

- ▶ /TEXT OFF
- 1
- 2
- TEXT1
- TEXT2
- ▷ MENU

Use RETURN Exit MENU

Select TEXT1 or TEXT2 to view Text.
Text is information that is presented using the full to full television screen.
It is usually not related to the program.

CAPTION VISION

- /TEXT OFF
- 1
- 2
- ▶ TEXT1
- TEXT2
- ▷ MENU

Use RETURN Exit MENU

Select CC/TEXT OFF if you do not want to use the CAPTION VISION mode.

CAPTION VISION

- ▶ /TEXT OFF
- 1
- 2
- TEXT1
- TEXT2
- ▷ MENU

Use RETURN Exit MENU

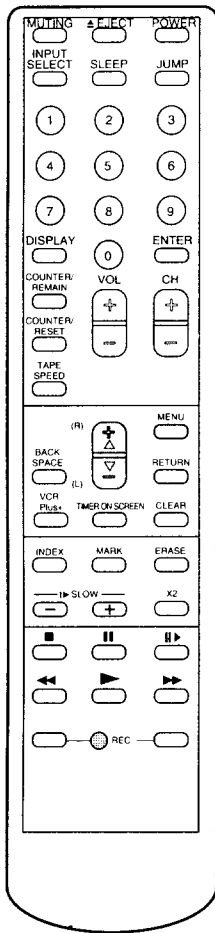
Press RETURN.
The Setting is completed.

Note

Captions may appear with a white box or another error instead of a certain word. Poor reception of TV programs can also cause errors in Closed Caption.

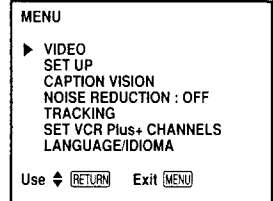
Using Noise Reduction Function

You can reduce the picture noise on the screen in VCR playback mode.

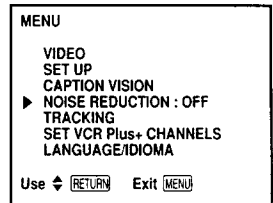
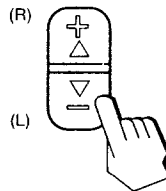


RM-Y138/W

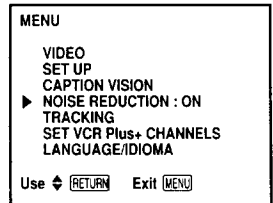
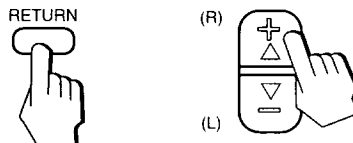
- 1** Press MENU.
The main menu appears, and the cursor points to VIDEO.



- 2** Press Δ + or ∇ - to select NOISE REDUCTION.



- 3** Press RETURN, then Δ + or ∇ - to select ON.



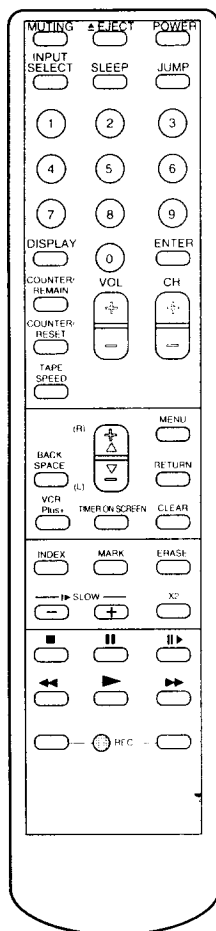
- 4** Press RETURN.
The picture noise is reduced.



Using the Timer-Activated Functions



Setting the Clock - AUTO CLOCK SET



RM-Y138/W

Notes

- The clock cannot be set automatically if you don't receive a channel that carries a time signal in your area. If so, set the clock manually (pp28-29).
- If there are only a few channels in your area that carry time signals, setting the clock automatically may take up to about 30 minutes. If nothing happens even after you wait about 30 minutes, set the clock manually.
- The menu disappears automatically if you don't proceed for more than one minute.

Before you use the timer feature for recording program, you need to set the current time and date.

Some TV and cable channels have started to transmit time signals with their broadcasts. Your VIDEO TV can pick up this time signal to automatically set the clock. After completing the steps below, when you turn off the VIDEO TV, it will automatically search for a channel that carries a time signal and set the clock. The Auto Clock Set feature only works if a channel in your area is broadcasting a time signal. If broadcasters in your area are not yet sending time signals, set the time manually (PP28 - 29).

Clock setting is necessary also to use ON/OFF TIMER, CHANNEL BLOCK, Timer Recording and VCR Plus Recording.

1 Press MENU.

The main menu appears.



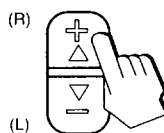
MENU
▶ VIDEO
SET UP
CAPTION VISION
NOISE REDUCTION : OFF
TRACKING
SET VCR Plus+ CHANNELS
LANGUAGE/IDIOMA

Use RETURN Exit MENU

2 In main menu, press Δ + or ∇ - to select SET UP.

Then press RETURN.

The SET UP screen appears.



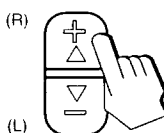
SET UP
▶ TIMER
TAPE REMAIN:T-120
AUTO REPEAT : OFF
CABLE : OFF
AUTO PROGRAM
CHANNEL ERASE/ADD
▶ MENU

Use RETURN Exit MENU

3 Press Δ + or ∇ - to select TIMER.

Press RETURN.

The TIMER screen appears.



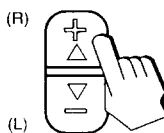
TIMER
▶ CURRENT TIME
ON/OFF TIMER
CHANNEL BLOCK
▶ MENU

Use RETURN Exit MENU

4 Press Δ + or ∇ - to select CURRENT TIME.

Press RETURN.

The CURRENT TIME screen appears.



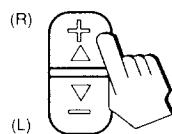
CURRENT TIME
▶ AUTO MANUAL
▶ MENU

Use RETURN Exit MENU

5 Press RETURN then select AUTO by using Δ + or ∇ -.

Press RETURN again.

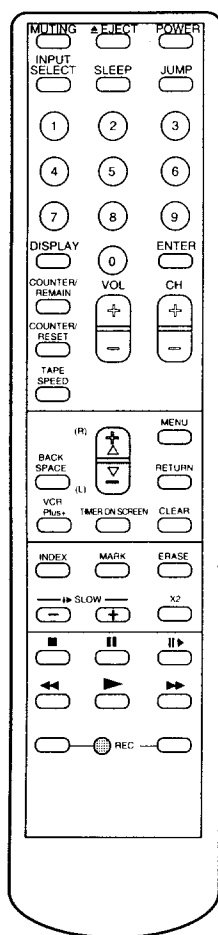
The Auto Clock Set screen appears.



CURRENT TIME
▶ FULL AUTO OPTIONS

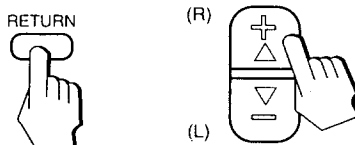
Use RETURN Exit MENU

Using the Timer-Activated Functions



RM-Y138/W

- 6** Press RETURN then select FULL AUTO by using Δ + or ∇ -. Press RETURN again.



When clock data service is available, the clock is set automatically with leaving the TV off

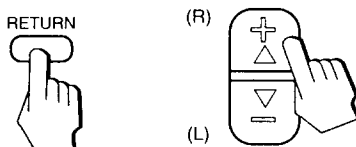
- 7** To activate the Auto Clock Set function, turn the TV off.
The VIDEO TV automatically sets the clock.
The VIDEO TV automatically searches for a channel that carries a time signal and sets your time zone and daylight saving time (if applicable). If your clock sets, but displays the wrong time zone or daylight saving time, you can adjust these settings by following the steps below.

If the clock is not activated

- 1** Follow steps 1 to 5 above.

- 2** Press RETURN then select OPTIONS by using Δ + or ∇ -. Press RETURN again.

The *CURRENT TIME SET CH* screen appears.



CURRENT TIME SET CH
▶ AUTO MANUAL
[CH---]

Use Δ RETURN Exit MENU

- 3** Press RETURN, then press Δ + or ∇ - to select AUTO or MANUAL.

If you select AUTO:

The VIDEO TV automatically searches for a channel that carries a time signal.

CURRENT TIME SET CH
▶ AUTO MANUAL
[CH---]

Use Δ RETURN Exit MENU

If you select MANUAL:

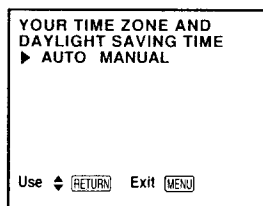
Set a channel that carries a time signal using the number buttons. Use this option if you know that channel. Most PBS member stations broadcast a time signal. For the fastest response, set the VIDEO TV to your local PBS station.

CURRENT TIME SET CH
▶ AUTO MANUAL
[CH---]
Push 0-9 keys to set
CURRENT TIME for clock
Then push RETURN
Use Δ RETURN Exit MENU



4 Press RETURN.

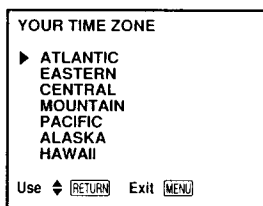
The **YOUR TIME ZONE AND DAYLIGHT SAVING TIME** screen appears.



5 Press RETURN, then press Δ + or ∇ - to select AUTO or MANUAL.

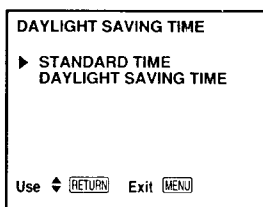
If you select **AUTO**:

The VIDEO TV automatically sets your time zone and daylight saving time (if applicable).



If you select **MANUAL**:

1. Press RETURN, then set the time zone of your area using Δ + or ∇ -.
2. Press RETURN, then select STANDARD TIME or DAYLIGHT SAVING TIME using Δ + or ∇ -.



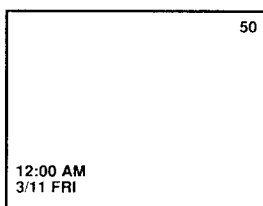
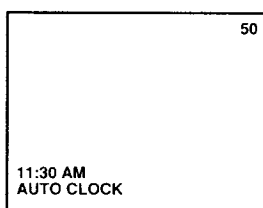
6 Press RETURN.



7 To activate the Auto Clock Set function, turn the TV off.

Notes

- If **AUTO CLOCK** has been set when you turn the VIDEO TV on, the display will appear as shown right. When the display does not appear as shown right even though **AUTO CLOCK** has been set: using the Manual Clock Set stops the automatic channel search when your set is power off. If the Auto Clock Set feature is not in use, the channel search is not performed when your set is power off.
- If you set the clock manually, the display will appear as shown right.



Notes

- Select **STANDARD**, if the **DAYLIGHT SAVING TIME** is not performed in your area.
- When you connect another VCR to the VHF/UHF antenna terminal, if VCR's tape is transmitted wrong time signal, your VIDEO TV automatically sets the clock by the time signal of the tape.

Not to set the clock by the time signal of VCR:

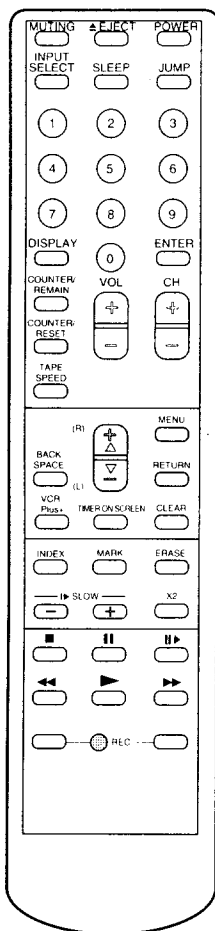
Turn your VIDEO TV off after having tuned VCR off or Set the clock manually on your VIDEO TV.

Using the Timer-Activated Functions

Setting the Clock - MANUAL CLOCK SET

EXAMPLE:

Set the time to 11:30AM, Sunday on the 25th of February, 1996.



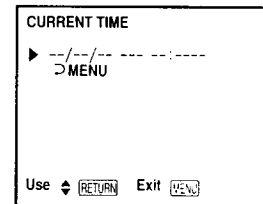
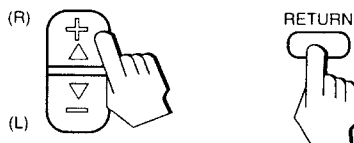
RM-Y138/W

- 1** In main menu, press $\Delta+$ or $\nabla-$ to select SET UP.
Then press RETURN.
The SET UP screen appears.

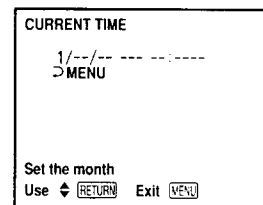
- 2** Press $\Delta+$ or $\nabla-$ to select TIMER.
Press RETURN.
The TIMER screen appears.

- 3** Press $\Delta+$ or $\nabla-$ to select CURRENT TIME.
Press RETURN.
The CURRENT TIME screen appears.

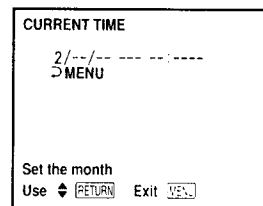
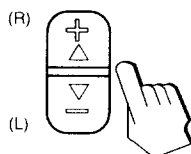
- 4** Press RETURN then select MANUAL by using $\Delta+$ or $\nabla-$.
Press RETURN.
The Manual Clock Set screen appears.



- 5** Press RETURN.
"Set the month" appears on the screen.
The month will appear in red.

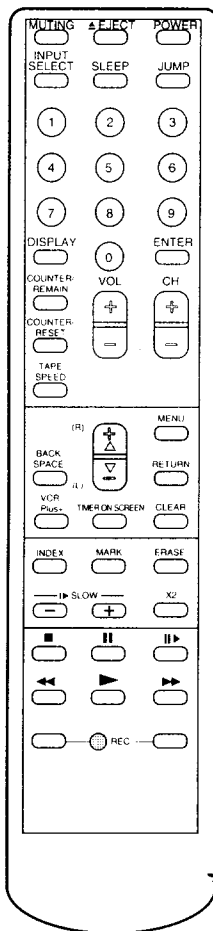


- 6** Press $\Delta+$ or $\nabla-$ to set the month.
Each time you press $\Delta+$ or $\nabla-$, the month changes in sequence.



To change or correct the setting before completing it
Press BACK SPACE to return to the item to be erased.

Using the Timer-Activated Functions



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To display the time
Press DISPLAY.

To return to the normal screen
Press MENU.

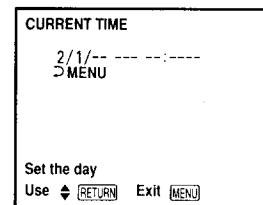
Notes

- The internal clock of this VIDEO TV operates on a 12-hour cycle.

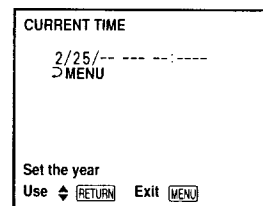
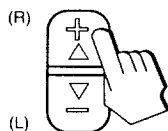
12:00 AM stands for midnight.
12:00 PM stands for noon.

- All the settings including CLOCK will be erased if you unplug the VIDEO TV or a power failure occurs. Reset the current time by following steps 1-11.
- You cannot change the clock during Timer Recording. To change the clock, stop the recording.

- 7** Press RETURN.
"Set the day" appears on the screen.

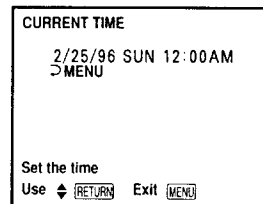


- 8** Press Δ + or ∇ - to set the day.
Each time you press Δ + or ∇ -, the day changes consecutively.
Press RETURN.
"Set the year" appears on the screen.



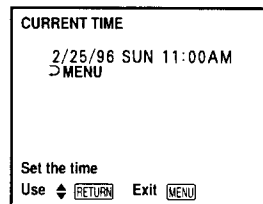
- 9** Press Δ + or ∇ - to set the year.
Each time you press Δ + or ∇ -, the year changes in sequence and the day of the week automatically changes.

Press RETURN.
"Set the time" appears on the screen.



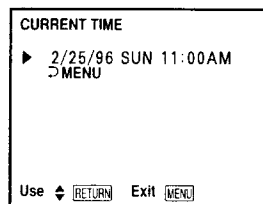
- 10** Press Δ + or ∇ - to set the hour.
Each time you press Δ + or ∇ -, the hour changes in sequence starting with "12:00AM."

Press RETURN.



- 11** Press Δ + or ∇ - to set the minute.
Each time you press Δ + or ∇ -, the minute changes in sequence.

Press RETURN.
The setting is completed and the clock starts.

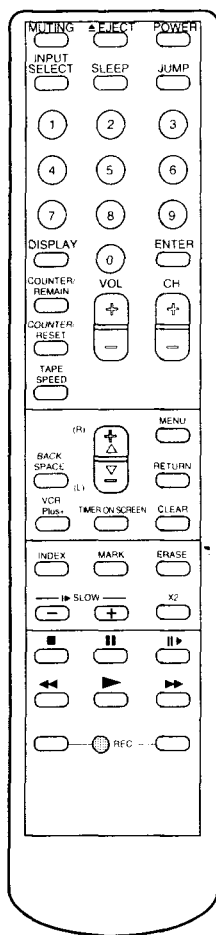


Using the Timer-Activated Functions

Setting the ON/OFF TIMER

With this function you can set your favorite program to appear on the screen at the time that you set.

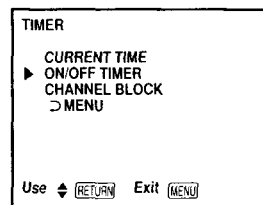
EXAMPLE: Set the timer to turn on the VIDEO TV every Monday through Friday at 3:15 PM for 2 hours, on channel 21.



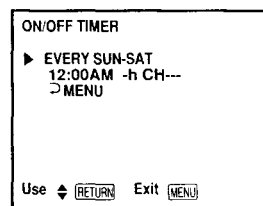
RM-Y138/W

- 1** In main menu, press Δ + or ∇ - to select SET UP.
Then press RETURN.
The SET UP screen appears.

- 2** Press Δ + or ∇ - to select TIMER.
Press RETURN.
The TIMER screen appears.



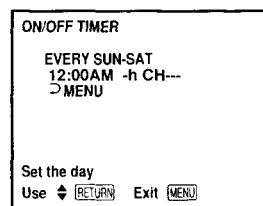
- 3** Press Δ + or ∇ - to select ON/OFF TIMER.
Press RETURN.
The ON/OFF TIMER screen appears.

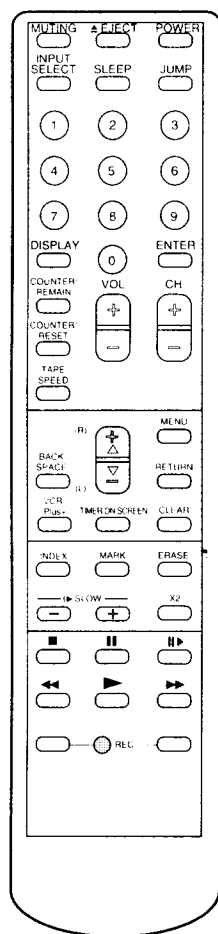


Note

If the ON/OFF TIMER display does not function, the current time has not been set and you cannot select ON/OFF TIMER. To set the clock, see "Setting the Clock-AUTO CLOCK SET/MANUAL CLOCK SET," PP 25-29.

- 4** Press RETURN.
"Set the day" appears on the screen.
"EVERY SUN-SAT" will be changed in red.

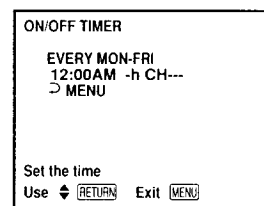
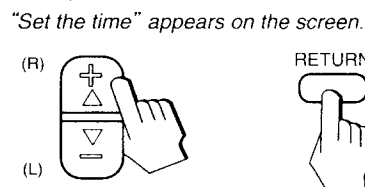




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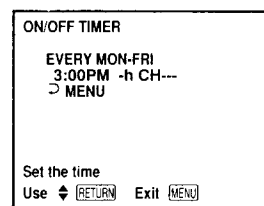
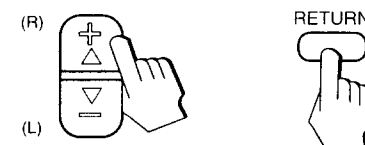
- 5** Press Δ + or ∇ - to set the day.
Each time you press Δ + or ∇ -, the days of the week change as shown in Fig. 1 (page 32).

Then press RETURN.



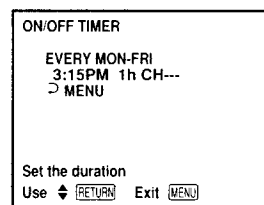
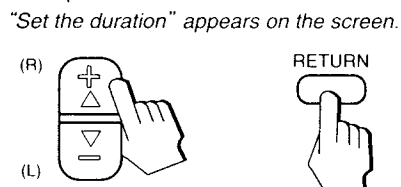
- 6** Press Δ + or ∇ - to set the hour that you want the TIMER to start.
Each time you press Δ + or ∇ -, the hour changes in sequence.

Then press RETURN.



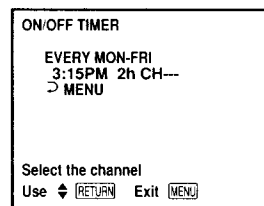
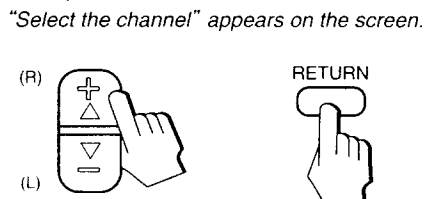
- 7** Press Δ + or ∇ - to set the minutes.
Each time you press Δ + or ∇ -, the minutes change in sequence.

Then press RETURN.



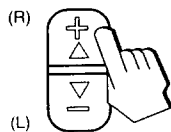
- 8** Press Δ + or ∇ - to set the duration of time.
Each time you press Δ + or ∇ -, the duration changes from "1" to "9" in sequence.

Then press RETURN.

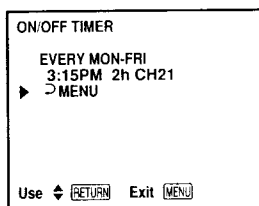
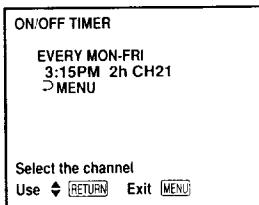


Using the Timer-Activated Functions

- 9** Press Δ + or ∇ - to set the channel that you want the TV to tune in.
Each time you press Δ + or ∇ -, the channel number changes in sequence.



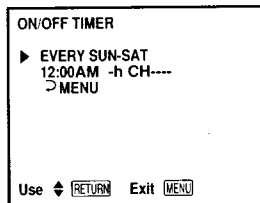
Press RETURN.
The setting is completed.



Cancelling the ON/OFF TIMER

- 1** Select the ON/OFF TIMER screen (Refer to pp. 30 - 32).
Press RETURN.
"EVERY SUN-SAT" will appear in red.

- 2** Press BACK SPACE to erase the ON/OFF TIMER.



To Change or Correct Setting the ON/OFF TIMER

Before completing it

Press BACK SPACE to return to the item to be changed or corrected.

When it is displayed in red, set it again by using the Δ + or ∇ -.

After completing it

Select the ON/OFF TIMER screen.

Then, press RETURN to return to the item to be changed or corrected.

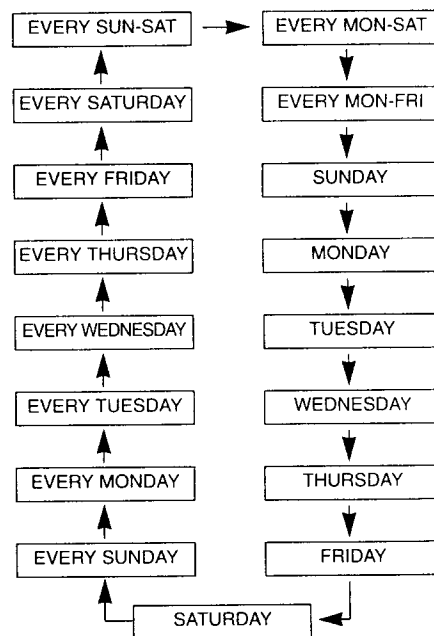
When it is displayed in red, set it again by using the Δ + or ∇ -.

Notes

- One minute before the timer goes off, the "TV will turn off" will appear on the screen.
- If you have not set the clock correctly, the ON/OFF TIMER will not operate at the proper time. To set the clock, see "Setting the Clock-AUTO CLOCK SET/MANUAL CLOCK SET," pp 25-29.
- All the settings including ON/OFF TIMER will be erased if you unplug the VIDEO TV or a power failure occurs. Reset the TIMER by following steps 1-9.

Fig. 1
Selecting the day(s) of the week

When you press Δ +, the days of the week appear in the following order.



(∇ -: reverse order)

Note

To return to the normal screen
Press MENU.

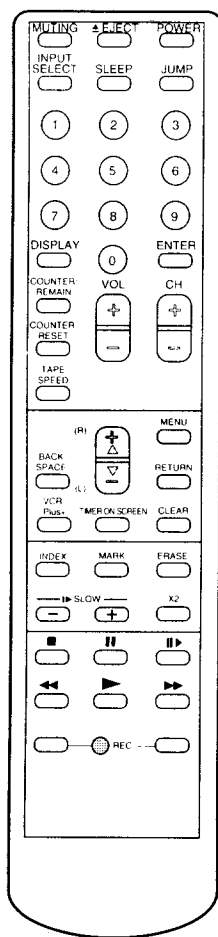
If "RESET CHANNEL BLOCK AND TRY AGAIN" appears on the screen when you completed the setting of the ON/OFF TIMER.

The ON/OFF TIMER setting overlaps the setting of the day, time, duration and channel of the CHANNEL BLOCK. Change the setting of the CHANNEL BLOCK or the channel setting of the ON/OFF TIMER.



Setting the CHANNEL BLOCK

This feature allows you to prevent children from watching unsuitable programs. Make sure the clock is set correctly. If it is not, set the clock first (pp. 25 - 29).



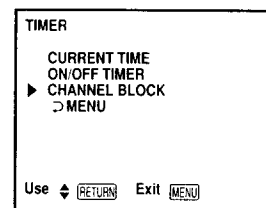
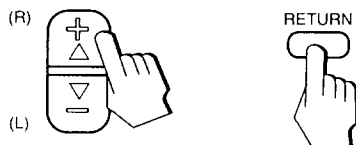
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- 1 In main menu, press Δ + or ∇ - to select SET UP.

Then press RETURN.
The SET UP screen appears.

- 2 Press Δ + or ∇ - to select TIMER.
Press RETURN.

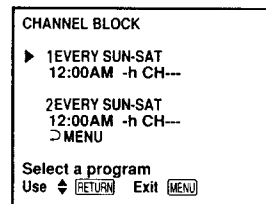
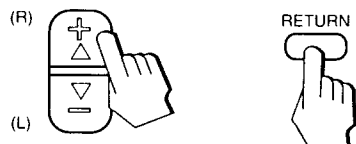
The TIMER screen appears.



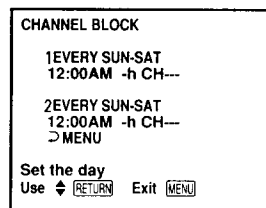
- 3 Press Δ + or ∇ - to select CHANNEL BLOCK.
Then press RETURN.

The CHANNEL BLOCK screen appears.

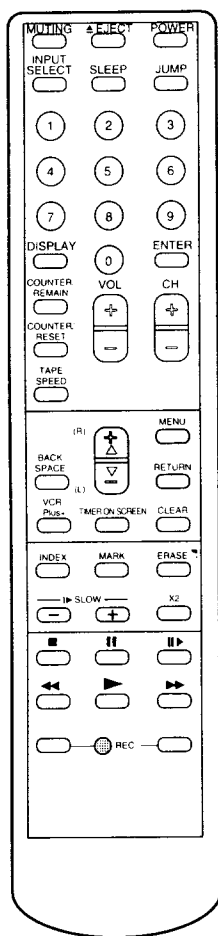
"Select a program" appears on the screen.



- 4 Press RETURN again.
"Set the day" appears on the screen.



Using the Timer-Activated Functions



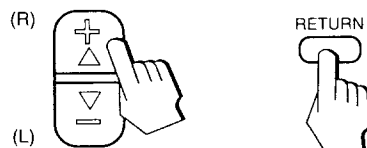
RM-Y138/W

5 Press Δ + or ∇ - to set the day.

Each time you press Δ + or ∇ -, the days of the week change as shown in Fig. 1 (page 32).

Then press RETURN.

"Set the time" appears on the screen.



CHANNEL BLOCK

1 EVERY MON-FRI
12:00AM -h CH---

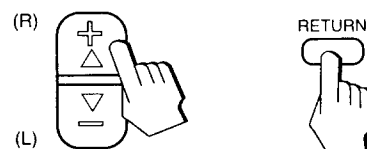
2 EVERY SUN-SAT
12:00AM -h CH---
▷ MENU

Set the time
Use Δ RETURN Exit MENU

6 Press Δ + or ∇ - to set the hour that you want to start blocking time.

Each time you press Δ + or ∇ -, the hour changes in sequence.

Then press RETURN.



CHANNEL BLOCK

1 EVERY MON-FRI
3:00PM -h CH---

2 EVERY SUN-SAT
12:00PM -h CH---
▷ MENU

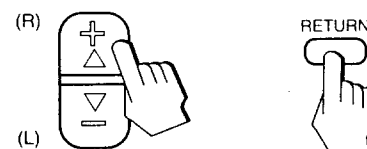
Set the time
Use Δ RETURN Exit MENU

7 Press Δ + or ∇ - to set the minutes.

Each time you press Δ + or ∇ -, the minutes change in sequence.

Then press RETURN.

"Set the duration" appears on the screen.



CHANNEL BLOCK

1 EVERY MON-FRI
3:15PM 1h CH---

2 EVERY SUN-SAT
12:00AM -h CH---
▷ MENU

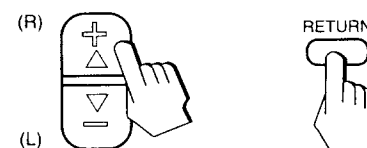
Set the duration
Use Δ RETURN Exit MENU

8 Press Δ + or ∇ - to set the duration of time.

Each time you press Δ + or ∇ -, the duration changes from "1" to "12" in sequence.

Then press RETURN.

"Select the channel" appears on the screen.



CHANNEL BLOCK

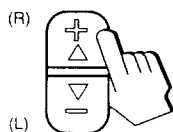
1 EVERY MON-FRI
3:15PM 2h CH---

2 EVERY SUN-SAT
12:00AM -h CH---
▷ MENU

Select the channel
Use Δ RETURN Exit MENU

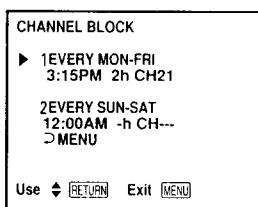
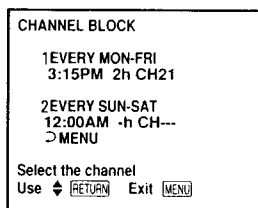
9 Press Δ + or ∇ - to set the channel that you want the TV to block out.

Each time you press Δ + or ∇ -, the channel number changes in sequence.



Press RETURN.

The setting is completed.



Notes

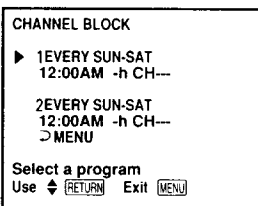
- If you have not set the clock correctly, the CHANNEL BLOCK will not operate at the proper time. To set the clock, see "Setting the Clock-Auto Clock Set/Manual Clock Set," pp 25-29.
- All the settings including CHANNEL BLOCK will be erased if you unplug the VIDEO TV or a power failure occurs. Reset the TIMER by following steps 1-9.
- If you select the blocked channel during the time you set, the message BLOCKED appears and the picture is blocked and the sound is muted.
- Recording is possible while the channel block is being activated.
- If the CHANNEL BLOCK and ON/OFF TIMER settings are overlapped, only the CHANNEL BLOCK function operates.

10 To set another program, repeat steps 1 to 3, press Δ + or ∇ - to select the next channel block and repeat steps 4 to 9.

Cancelling the CHANNEL BLOCK

- 1 Select the CHANNEL BLOCK screen. (Refer to page 33.)
Press RETURN.
EVERY SUN-SAT will appear in red.

- 2 Press BACK SPACE to erase the CHANNEL BLOCK.



To Change or Correct Setting the CHANNEL BLOCK

Before completing it

Press BACK SPACE to return to the item to be changed or corrected.

When it is displayed in red, set it again by using the Δ + or ∇ -.

After completing it

Select the CHANNEL BLOCK screen.

Then, press RETURN to return to the item to be changed or corrected.

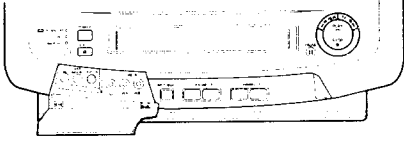
When it is displayed in red, set it again by using the Δ + or ∇ -.

Note

To return to the normal screen
Press MENU.

Using the Play On Functions

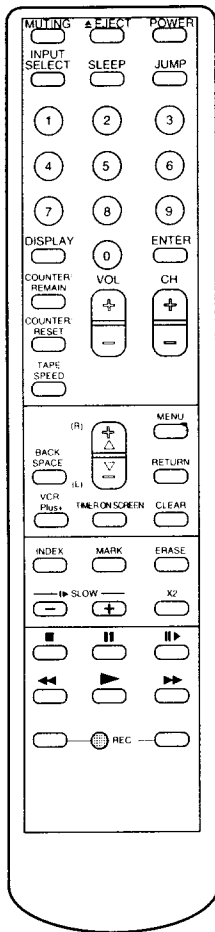
You can use PLAY ON on your VIDEO TV to monitor quickly other Video/Audio sources (such as a camcorder, a video game, etc).



1 Connect an AV cable(Video camera, Video game, etc) to LINE IN jacks on the front door or rear panel of your VIDEO TV.

2 Press the PLAY ON(Green Color button) inside the front door.
"LINE" appears on the screen.

Although your VIDEO TV is in TV mode or VCR play back mode, it turns to LINE IN mode directly by pressing PLAY ON.



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When you press PLAY ON during the TV or VCR playback mode

Your VIDEO TV turns to LINE in mode.

To return to TV mode during play on mode

Press INPUT SELECT or CH +/-

When you press PLAY ON twice during power on

VIDEO TV turns off.

When you press PLAY ON during power off

Your VIDEO TV turns on and turns to LINE IN mode directly.

When you press this button again, your VIDEO TV will be turned off.

When you press PLAY ON during recording or LINE in mode,

The PLAY ON button does not operate.

To turn it off, press POWER.

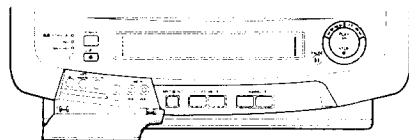
Note

When the LINE IN jacks inside the front door and on the rear panel are connected to external equipment at the same time, the LINE IN jacks inside the front door are prior to them on the rear panel.

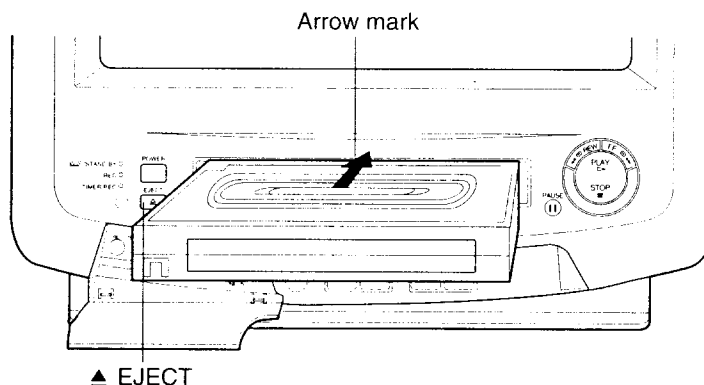
Playing Back a Video Tape




Inserting a Video Cassette



- 1 Insert a video cassette with the arrow mark facing upwards.




- 2 Gently press the center of the front side of the cassette until the mechanism draws it into the compartment.
When the cassette has been inserted, the  / STAND BY indicator lights and the VIDEO TV turns on automatically.

Note

When you insert a cassette without a safety tab, playback starts automatically (AUTO PLAYBACK function).

Ejecting the cassette

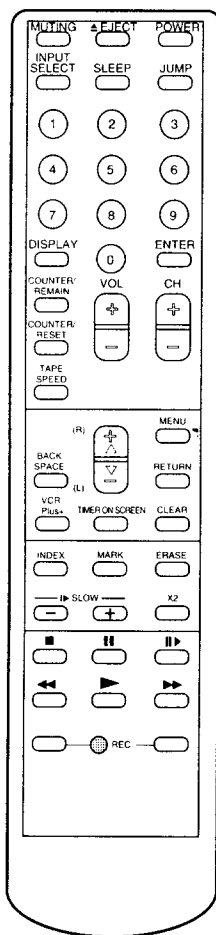
Press EJECT .

You can also eject the cassette when the power is off.

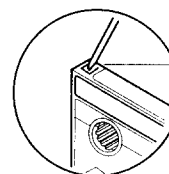
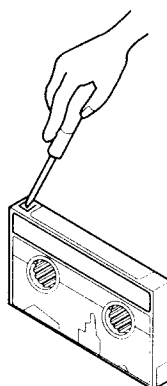
Protecting your cassette against accidental erasure

The cassette is provided with a safety tab to protect against accidental recording. Break off the safety tab with a screwdriver or other suitable tool.

If the safety tab is removed, the cassette will be ejected when you try to record on the cassette.



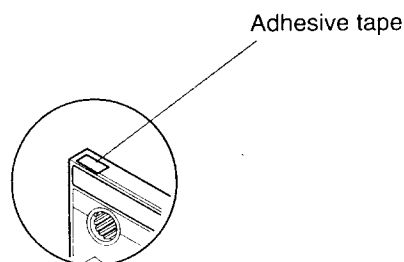
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Safety tab

Playing Back a Video Tape

To record on a cassette with the safety tab broken off, simply cover the tab hole with adhesive tape.



Maximum recording time of a tape

The quality of tape you use greatly affects record/playback quality and the life of the VIDEO TV. Use only cassette tapes that have the official VHS logo.

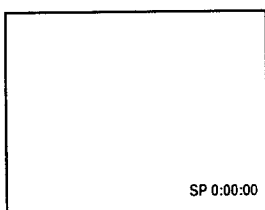
High-grade tapes give the best results, especially at the EP speed. They also have a better oxide coating that helps prevent dirty video heads. Although T-160 tapes offer the longest recording time, they contain thinner tape that is more likely to stretch or cause tape jams. We suggest that you use T-120 or shorter tapes.

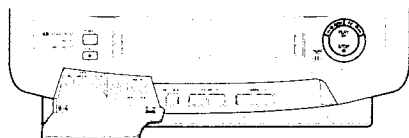
Recording in the SP or EP mode is possible with this unit. When recording, select the desired recording mode (SP or EP) with TAPE SPEED on the Commander. During playback, the unit automatically detects the recording format, and then plays back the tape in the appropriate mode.

The following chart shows the maximum recording times for T-60, T-120 and T-160 tapes at the recording speeds as below.

Speed	T-60	T-120	T-160
SP	1 Hour (60 Minutes)	2 Hours (120 Minutes)	2 2/3 Hours (160 Minutes)
EP	3 Hours (180 Minutes)	6 Hours (360 Minutes)	8 Hours (480 Minutes)

Playing back a video tape in the LP mode is possible but recording in this mode is not possible with this unit.





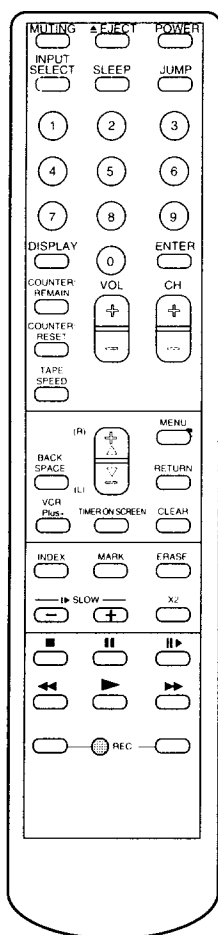
Playing Back a Prerecorded Cassette Tape

- 1 Insert a prerecorded cassette into the tape compartment. The VIDEO TV automatically turns on.

Note

When playing back rental tapes, select NOISE REDUCTION:ON in main menu image detail improves.

- 2 If playback does not start, press PLAY ►. The tape plays back at the speed at which was recorded.



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To stop playback

Press STOP ■.

To stop playback for a moment

Press PAUSE ■■.

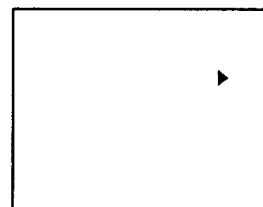
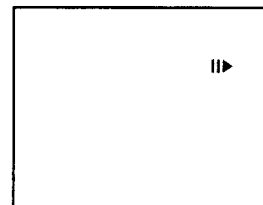
■■► appears on the screen and image will stop on the screen.

To resume playback, press PAUSE ■■ or PLAY ►.

► appears on the screen.

When the tape is played back to the end

The tape is automatically rewound to the beginning (auto rewind). The power remains on.



To rewind the tape to its beginning and to playback automatically (Auto Playback Function)

In the main menu, press ▲+ or ▼- to select SET UP during playback or stop mode and then press RETURN. And press ▲+ or ▼- to select AUTO REPEAT and then press RETURN. By using ▲+ or ▼-, select AUTO REPEAT to ON.

Variable Speed Playback

You can enjoy playing back pictures in variable speeds on the VCR.

Still Picture

During playback mode, press PAUSE ■■. To resume normal playback, press PLAY ► or PAUSE ■■.

Notes

- No sound accompanies the picture, which may be unstable or have video "noise" in it. This is normal.
- If the VCR is left in the pause mode for more than about 5 minutes, the VIDEO TV will be in playback mode automatically.

Playing Back a Video Tape

To see a slow motion (Slow Picture)

Press -SLOW+ during playing back.

To advance the picture frame by frame (Frame Picture)

Press FRAME **II▶** during Still Picture.

To advance the tape rapidly

While the tape is being played back, pressing FAST FORWARD **▶▶** will move the tape forward at high speed so you can see the picture and choose where to stop. When you do this, **[▶▶]** appears on the screen.

If you release the button, the VCR will return to normal playback.

When tape is not being played back and the VCR is in the stop mode, pressing FAST FORWARD **▶▶** winds the tape forward at very high speed without displaying the picture.

When you do this, **▶▶** appears on the screen.

You can stop the forward running of the tape at any time by pressing STOP **■**.

If during the operation, the tape rewinds forward to the end, the machine will automatically stop and then rewind the tape back to the beginning again.

By pressing X2, you can now run through a tape at twice normal speed to find the exact place you want. Revert to normal speed by pressing PLAY **▶**.

To rewind the tape rapidly

If you press REWIND/REVIEW **◀◀** while the tape is being played back, you can play the tape backwards to find a particular spot. When you do this, **[◀◀]** appears on the screen and the tape will be rewound at very high speed.

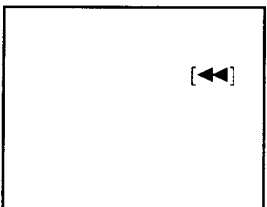
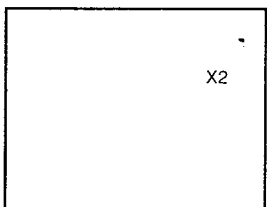
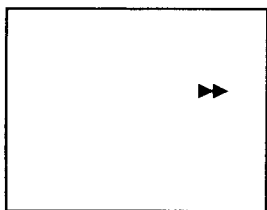
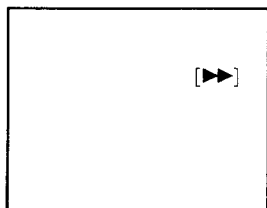
At the end, STOP appears on the screen and invite you to press PLAY **▶**.

Viewing TV Programs During Tape Playback

While a tape is being played, you can switch to watching TV broadcasts.

Press STOP **■**.

The VIDEO TV returns to normal TV reception mode.

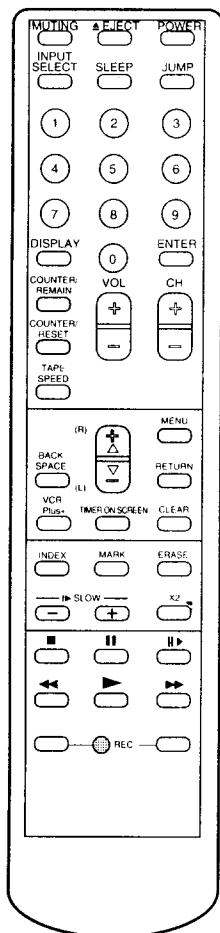




Playing Back a Tape Recorded on Another VCR

When playing back a tape recorded on another VCR, there might be some picture noise.

Tracking ensures that the tape is correctly aligned with the playback head. It only works in the "playback" mode and its principle purpose is to minimize picture shake and what is called "noise" (fuzzy lines across the picture during playback and still picture).



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It is adjusted either automatically or manually.

Automatic tracking adjustment function

When playback starts, the auto tracking automatically adjusts the picture. "AUTO TRACKING" flashes for 5 seconds.

The automatic tracking control is activated in the following conditions:

- When the cassette is inserted for the first time.
- When the recording mode on the playback tape is switched from SP to EP and back again.
- When the picture is distorted by scratches on the tape.
- When TRACKING AUTO:ON is selected in the Tracking menu after the picture is adjusted automatically.

If auto tracking does not work, the tracking was probably last adjusted manually.

Adjusting the tracking manually during playback

When the playback picture proves to have streaks or snow during normal playback, Still picture or Slow picture, adjust the picture manually using the Tracking menu. Press either $\Delta+$ or $\nabla-$ to select TRACKING ADJUST in Tracking menu to obtain the best possible picture. Press RETURN and adjust by pressing $\Delta+$ or $\nabla-$. When playing back a tape recorded on another VCR, the tracking condition is automatically adjusted on this VCR.

Notes

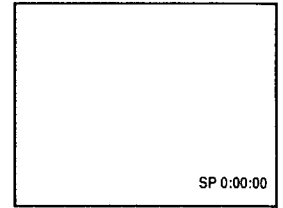
- Auto tracking adjustment may be impossible when the recording condition of the tape is poor.
- During auto tracking adjustment, streaks or noise may appear.

Playing Back a Video Tape

Using COUNTER/REMAIN

To display the counter, press COUNTER /REMAIN once.

The tape counter shows the tape travel time in hours, minutes and seconds during recording or playback.



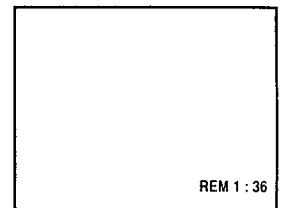
Note

For seeing the remaining tape time, first check the tape mode.

If you want to see the remaining tape time in T-120, press RETURN then Δ + or ∇ - until T-120 appears in TAPE REMAIN screen. For OTHERS, press the button until OTHERS appears.

To see the remaining tape time during recording or playback, press COUNTER/REMAIN twice.

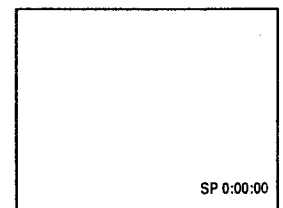
The remaining tape time appears with "REM."



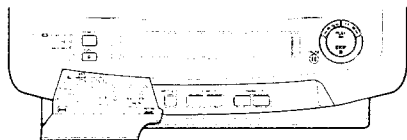
Using Counter Memory Function

The counter memory makes it easy to return to a particular spot on the tape after recording or playback. The tape stops when the counter reaches SP 0:00:00. This feature is especially helpful when editing a recording.

- 1 Press COUNTER/REMAIN to see the counter.
- 2 Start recording or playback, and press COUNTER RESET at the point you want to return to.
The counter displays SP 0:00:00.
- 3 Press STOP ■ when you finish recording or playing the tape.
- 4 Press REWIND/REVIEW ◀◀.
The tape stops at SP 0:00:00.
- 5 Press PLAY ▶ to play the tape.



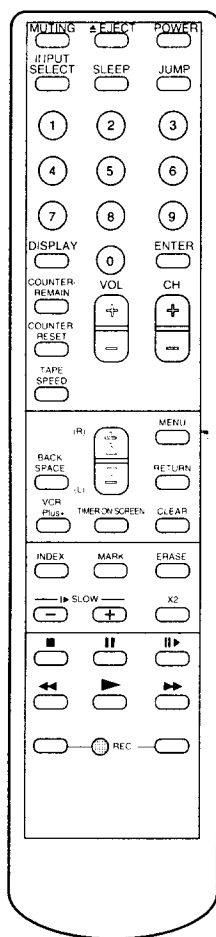
Recording TV Programs



Recording TV Programs

Caution

Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission and/or program owner.



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- 1** Insert a cassette with the safety tab.
The VIDEO TV turns on automatically (Auto power on).
- 2** Select the recording tape speed, SP or EP, with TAPE SPEED.
- 3** Select the channel to be recorded with CH +/- or 0-9 buttons.
- 4** Press the two REC buttons on the Commander at the same time, or the REC button on the unit.
The REC indicator lights.

To stop recording

Press STOP ■.

Temporarily to stop recording at a particular point

Press PAUSE || to eliminate unwanted station breaks or program material while recording a TV program.

REC || appears on the screen.

To resume recording, press PAUSE || again.

When the recording pause mode lasts for more than approximately 5 minutes, the unit enters the stop mode.

Note

When the tape reaches its end

The tape rewinds to the beginning. The power will remain on.

Recording a Program Without Watching the TV

Turn off the power of the TV.

There will be no interference with the recording.

You cannot watch another program while recording one program.

Recording TV Programs using VCR Plus +

VCR Plus+ is a feature in SONY VCRs that simplifies the task of programming the VIDEO TV to make timer recordings.

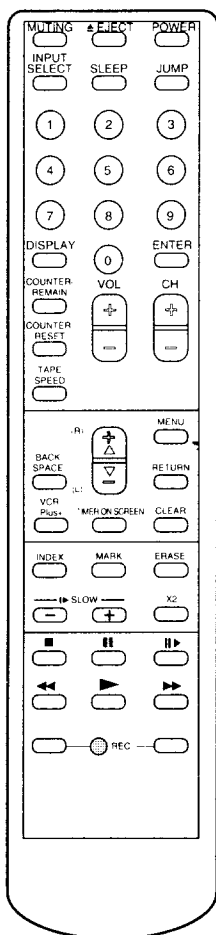
How VCR Plus+ works

Whenever you want to record a TV program, all you need to do is to look up the program's "PlusCode," a number assigned to each program that's published in the TV section of most newspapers, cable TV listings, and even TV GUIDE magazine. Then, just enter the PlusCode of the program you want and the VIDEO TV is automatically programmed to record that show. It's that simple. With VCR Plus+ , you no longer have to go through a lengthy and often repetitive procedure when you set start and stop times, channel numbers, and dates. All this information is automatically sent to your VIDEO TV when you enter the program's PlusCode.

Setting Up VCR Plus +

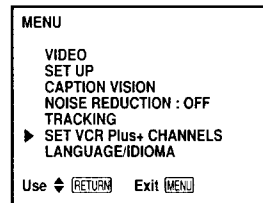
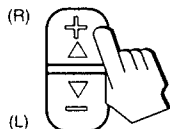
Setting up your VIDEO TV involves coordinating the TV channel number (the number you turn on your set to watch a program) with the guide channel number (the number that's assigned to that channel in your program guide). To get the guide channel numbers, find the "Channel Line-up Chart" in the program guide for your area that features VCR PlusCodes. It usually looks like the example on page 45.

For each channel your VIDEO TV receives, use the Channel Line-up Chart to check that the channel numbers match. For example, if HBO is listed in the Channel Line-up Chart on channel 33, and your VIDEO TV receives HBO on channel 15, you need to coordinate these numbers using the following procedure. For channels in which the numbers are the same (for example, if your VIDEO TV receives HBO on channel 33, and the guide channel number is 33), you can skip this procedure.

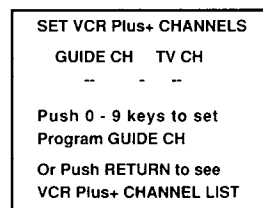


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- 1 In main menu, press Δ + or ∇ - to select SET VCR Plus+ CHANNELS.

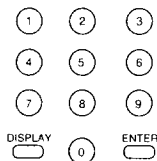


- 2 Press RETURN
The SET VCR Plus+ Channels screen appears and the GUIDE CH is highlighted.



3 Press 0-9 to enter the channel number assigned in the program guide and press ENTER.

The TV CH is highlighted.



ENTER



SET VCR Plus+ CHANNELS

GUIDE CH TV CH

25 - 25

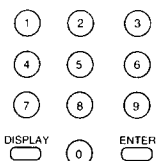
Push 0 - 9 keys to set your TV CH

Then push ENTER

Example of "PlusCode"

5:30	14	MOVIE - Musical (2hrs.)	33044
	2	SPORTS - Golf (1hr. 25min.)	42060
	CNN	WS 9974	
6:30	2 3 4	DRAMA-Comedy(2hrs.)	17390
	5	SCIENCE AND TECHNOLOGY	
		(1hr.15min.)	73457

4 Press 0-9 to enter the actual number on your VIDEO TV channel.



ENTER



SET VCR Plus+ CHANNELS

GUIDE CH TV CH

25 - 25

Push 0 - 9 keys to set program GUIDE CH

Or Push RETURN to see VCR Plus+ CHANNEL LIST

SET VCR Plus+ CHANNELS

GUIDE CH TV CH

25 - 10

Push 0 - 9 keys to set your TV CH

Or Push RETURN to see VCR Plus+ CHANNEL LIST

5 Repeat steps 3-4 for each channel whose numbers don't match.

6 When you have set all channels, press RETURN to confirm your channel settings.

RETURN



VCR Plus+ CHANNEL LIST

Page 1

GUIDE TV

3 - 15

5 - 22

6 - 17

17 - 55

28 - 9

GUIDE TV

33 - 18

59 - 3

61 - 47

77 - 35

90 - 8

Use to change page
Push MENU to Exit

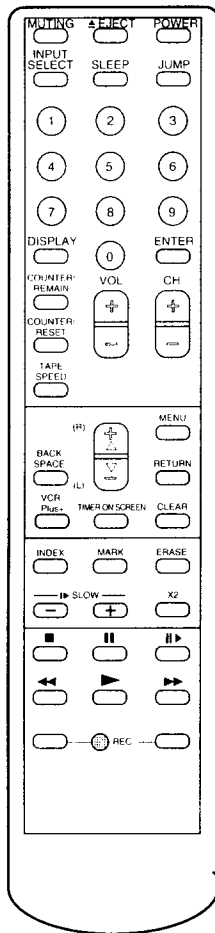
Example of "Channel Line-up Chart"

CABLE CH	CABLE TV	VCR Plus+ GUIDE CH
16	AMC American Movie Classics	35
17	BRV Bravo (program grnd only)	54
20	CNN Cable News Network	42
21	CSP C-SPAN	28
22	DIS The Disney Channel	23
25	DSC The Discovery Channel	37
34	ESN ESPN	34
35	FAM The Family Channel	47
5	HBO Home Box Office	33
27	LIF Lifetime	46
29	MAX Cinemax	45
30	MTV Music Television	48
31	NIK Nickelodeon	38
38	SC Sports Channel	59
39	SCA Sports Channel America	70
45	SHO Showtime	41
17	TBS TBS SuperStation	43
44	TMC The Movie Channel	58
49	TNN The Nashville Network	49
50	TNT Turner Network Television	52
51	USA USA Network	44

Note

- To return to the normal screen. Press MENU.

Recording TV Programs Using VCR Plus+



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Before you start

- Check that the clock is set correctly.
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- Turn on your VIDEO TV. When using a cable box, turn it on.

Notes

- You cannot set VCR Plus+ in the following cases:
When the VIDEO TV is turned off.
- The timer will not accept setting in the following cases:
When you select Daily for a Saturday and Sunday program.
When you select Daily or Weekly for a program more than seven days ahead.
When you enter the PlusCode of a program that has already ended.
- If the 6 programs have already been preset, "6 PROGRAMS HAVE ALREADY BEEN SET" appears on the screen.

Recording TV Programs

You can preset up to six programs within a one month time frame.

1 Press VCR Plus+ .

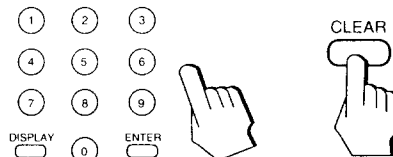


VCR Plus+	1/6 SAT
PlusCode [-----]	TAPE SPEED [AT]

Enter Program's PlusCode using 0-9 keys

To change tape speed push TAPE SPEED

2 Press 0-9 to enter the Plus Code of the program you want to preset. If you've made a mistake, press CLEAR and enter the PlusCode again.



VCR Plus+	1/6 SAT
PlusCode [26854---]	TAPE SPEED [AT]

After entering PlusCode, push RETURN

If you make a mistake, push CLEAR

3 Press TAPE SPEED to select the tape speed, SP, EP or AT.



VCR Plus+	1/6 SAT
PlusCode [26854---]	TAPE SPEED [SP]

Enter Program's PlusCode using 0-9 keys

To change tape speed push TAPE SPEED

4 Press RETURN. The recording information appears on the screen. Check that the information is correct. If it is not, press CLEAR to cancel.

To preset another timer setting, repeat steps 1 to 4.

Notes

- When you press TIMER ON SCREEN after having checked the recording information, the TIMER SET/CHECK menu appears with the recording information of program presetting using VCR Plus+.
- **Once, Daily or Weekly Setting**

Press RETURN to return cursor to the item presetting in TIMER SET/CHECK menu (Then refer to the step 3 on page 48 and Daily/Weekly Recording on page 49.).

VCR Plus+	1/6 SAT
PlusCode [26854]	TAPE SPEED [EP]
RECORDING TIME	
DATE	START STOP CH
1/25THU	4:30PM 6:00PM 03EP

To set timer, push POWER
To cancel, Push CLEAR

5 Press POWER to turn off the VIDEO TV.

The TIMER REC indicator lights up and the VIDEO TV stands by for recording. When using a cable box, leave it on. The VIDEO TV automatically turns on, records the program and turns off.

Timer Recording



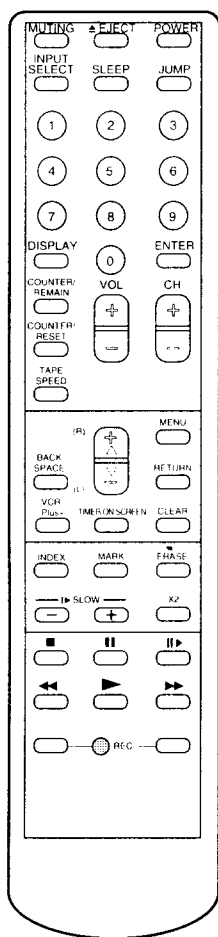
You can preset up to six recordings up to one month in advance. The recordings can be preset with the Commander while referring to the **TIMER SET/CHECK** display on the screen.

Before you begin, check the following points.

- The date and clock must be set correctly. (See "Setting the Clock - AUTO/MANUAL CLOCK SET" on pp. 25-29.)
- Make sure that the cassette tape is long enough to record all the programs.
- Make sure that the safety tab on the cassette is not broken off.

Recording from today to one month later

If today is August 31st, you can set the timer to record a program broadcast between today and September 30 (for 31 days). If today is January 31st, you can set the timer to record a program broadcast between today and February 28th (for 29 days). A leap year is automatically considered.



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Setting the Timer

Example: Suppose you want to record a program broadcast on channel 26 from 9:00 PM on Wednesday January 10 in EP mode. Note that 12:00 AM is midnight and 12:00 PM is noon.

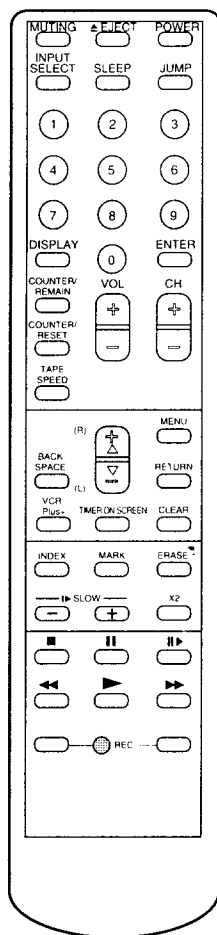
- 1 Press **TIMER ON SCREEN**.
The **TIMER SET/CHECK** screen appears.

TIMER ON SCREEN



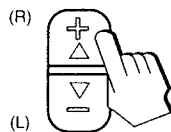
TIMER SET/CHECK			1/6 SAT
DATE	START	STOP	CH
▶ 1/10	21:00	23:00	26
1/11	21:00	23:00	26
1/12	21:00	23:00	26
1/13	21:00	23:00	26
1/14	21:00	23:00	26
1/15	21:00	23:00	26
1/16	21:00	23:00	26
1/17	21:00	23:00	26
1/18	21:00	23:00	26
1/19	21:00	23:00	26
1/20	21:00	23:00	26
1/21	21:00	23:00	26
1/22	21:00	23:00	26
1/23	21:00	23:00	26
1/24	21:00	23:00	26
1/25	21:00	23:00	26
1/26	21:00	23:00	26
1/27	21:00	23:00	26
1/28	21:00	23:00	26
1/29	21:00	23:00	26
1/30	21:00	23:00	26
1/31	21:00	23:00	26
1/1	21:00	23:00	26
1/2	21:00	23:00	26
1/3	21:00	23:00	26
1/4	21:00	23:00	26
1/5	21:00	23:00	26
1/6	21:00	23:00	26
1/7	21:00	23:00	26
1/8	21:00	23:00	26
1/9	21:00	23:00	26
1/10	21:00	23:00	26
1/11	21:00	23:00	26
1/12	21:00	23:00	26
1/13	21:00	23:00	26
1/14	21:00	23:00	26
1/15	21:00	23:00	26
1/16	21:00	23:00	26
1/17	21:00	23:00	26
1/18	21:00	23:00	26
1/19	21:00	23:00	26
1/20	21:00	23:00	26
1/21	21:00	23:00	26
1/22	21:00	23:00	26
1/23	21:00	23:00	26
1/24	21:00	23:00	26
1/25	21:00	23:00	26
1/26	21:00	23:00	26
1/27	21:00	23:00	26
1/28	21:00	23:00	26
1/29	21:00	23:00	26
1/30	21:00	23:00	26
1/31	21:00	23:00	26
1/1	21:00	23:00	26
1/2	21:00	23:00	26
1/3	21:00	23:00	26
1/4	21:00	23:00	26
1/5	21:00	23:00	26
1/6	21:00	23:00	26
1/7	21:00	23:00	26
1/8	21:00	23:00	26
1/9	21:00	23:00	26
1/10	21:00	23:00	26
1/11	21:00	23:00	26
1/12	21:00	23:00	26
1/13	21:00	23:00	26
1/14	21:00	23:00	26
1/15	21:00	23:00	26
1/16	21:00	23:00	26
1/17	21:00	23:00	26
1/18	21:00	23:00	26
1/19	21:00	23:00	26
1/20	21:00	23:00	26
1/21	21:00	23:00	26
1/22	21:00	23:00	26
1/23	21:00	23:00	26
1/24	21:00	23:00	26
1/25	21:00	23:00	26
1/26	21:00	23:00	26
1/27	21:00	23:00	26
1/28	21:00	23:00	26
1/29	21:00	23:00	26
1/30	21:00	23:00	26
1/31	21:00	23:00	26
1/1	21:00	23:00	26
1/2	21:00	23:00	26
1/3	21:00	23:00	26
1/4	21:00	23:00	26
1/5	21:00	23:00	26
1/6	21:00	23:00	26
1/7	21:00	23:00	26
1/8	21:00	23:00	26
1/9	21:00	23:00	26
1/10	21:00	23:00	26
1/11	21:00	23:00	26
1/12	21:00	23:00	26
1/13	21:00	23:00	26
1/14	21:00	23:00	26
1/15	21:00	23:00	26
1/16	21:00	23:00	26
1/17	21:00	23:00	26
1/18	21:00	23:00	26
1/19	21:00	23:00	26
1/20	21:00	23:00	26
1/21	21:00	23:00	26
1/22	21:00	23:00	26
1/23	21:00	23:00	26
1/24	21:00	23:00	26
1/25	21:00	23:00	26
1/26	21:00	23:00	26
1/27	21:00	23:00	26
1/28	21:00	23:00	26
1/29	21:00	23:00	26
1/30	21:00	23:00	26
1/31	21:00	23:00	26
1/1	21:00	23:00	26
1/2	21:00	23:00	26
1/3	21:00	23:00	26
1/4	21:00	23:00	26
1/5	21:00	23:00	26
1/6	21:00	23:00	26
1/7	21:00	23:00	26
1/8	21:00	23:00	26
1/9	21:00	23:00	26
1/10	21:00	23:00	26
1/11	21:00	23:00	26
1/12	21:00	23:00	26
1/13	21:00	23:00	26
1/14	21:00	23:00	26
1/15	21:00	23:00	26
1/16	21:00	23:00	26
1/17	21:00	23:00	26
1/18	21:00	23:00	26
1/19	21:00	23:00	26
1/20	21:00	23:00	26
1/21	21:00	23:00	26
1/22	21:00	23:00	26
1/23	21:00	23:00	26
1/24	21:00	23:00	26
1/25	21:00	23:00	26
1/26	21:00	23:00	26
1/27	21:00	23:00	26
1/28	21:00	23:00	26
1/29	21:00	23:00	26
1/30	21:00	23:00	26
1/31	21:00	23:00	26
1/1	21:00	23:00	26
1/2	21:00	23:00	26
1/3	21:00	23:00	26
1/4	21:00	23:00	26
1/5	21:00	23:00	26
1/6	21:00	23:00	26
1/7	21:00	23:00	26
1/8	21:00	23:00	26
1/9	21:00	23:00	26
1/10	21:00	23:00	26
1/11	21:00	23:00	26
1/12	21:00	23:00	26
1/13	21:00	23:00	26
1/14	21:00	23:00	26
1/15	21:00	23:00	26
1/16	21:00	23:00	26
1/17	21:00	23:00	26
1/18	21:00	23:00	26
1/19	21:00	23:00	26
1/20	21:00	23:00	26
1/21	21:00	23:00	26
1/22	21:00	23:00	26
1/23	21:00	23:00	26
1/24	21:00	23:00	26
1/25	21:00	23:00	26
1/26	21:00	23:00	26
1/27	21:00	23:00	26
1/28	21:00	23:00	26
1/29	21:00	23:00	26
1/30	21:00	23:00	26
1/31	21:00	23:00	26
1/1	21:00	23:00	26
1/2	21:00	23:00	26
1/3	21:00	23:00	26
1/4	21:00	23:00	26
1/5	21:00	23:00	26
1/6	21:00	23:00	26
1/7	21:00	23:00	26
1/8	21:00	23:00	26
1/9	21:00	23:00	26
1/10	21:00	23:00	26
1/11	21:00	23:00	26
1/12	21:00	23:00	26
1/13	21:00	23:00	26
1/14	21:00	23:00	26
1/15	21:00	23:00	26
1/16	21:00	23:00	26
1/17	21:00	23:00	26
1/18	21:00	23:00	26
1/19	21:00	23:00	26
1/20	21:00	23:00	26
1/21	21:00	23:00	26
1/22	21:00	23:00	26
1/23	21:00	23:00	26
1/24	21:00	23:00	26
1/25	21:00	23:00	26
1/26	21:00	23:00	26
1/27	21:00	23:00	26
1/28	21:00	23:00	26
1/29	21:00	23:00	26
1/30	21:00	23:00	26
1/31	21:00	23:00	26
1/1	21:00	23:00	26
1/2	21:00	23:00	26
1/3	21:00	23:00	26
1/4	21:00	23:00	26
1/5	21:00	23:00	26
1/6	21:00	23:00	26
1/7	21:00	23:00	26
1/8	21:00	23:00	26
1/9	21:00	23:00	26
1/10	21:00	23:00	26
1/11	21:00	23:00	26
1/12	21:00	23:00	26
1/13	21:00	23:00	26
1/14	21:00	23:00	26
1/15	21:00	23:00	26
1/16	21:00	23:00	26
1/17	21:00	23:00	26
1/18	21:00	23:00	26
1/19	21:00	23:00	26
1/20	21:00	23:00	26
1/21	21:00	23:00	26
1/22	21:00	23:00	26
1/23	21:00	23:00	26
1/24	21:00	23:00	26
1/25	21:00	23:00	26
1/26	21:00	23:00	26
1/27	21:00	23:00	26
1/28	21:00	23:00	26
1/29	21:00	23:00	26
1/30	21:00	23:00	26
1/31	21:00	23:00	26
1/1	21:00	23:00	26
1/2	21:00	23:00	26
1/3	21:00	23:00	26
1/4	21:00	23:00	26
1/5	21:00	23:00	26
1/6	21:00	23:00	26
1/7	21:00	23:00	26
1/8	21:00	23:00	26
1/9	21:00	23:00	26
1/10	21:00	23:00	26
1/11	21:00	23:00	26
1/12	21:00	23:00	26
1/13	21:00	23:00	26
1/14	21:00	23:00	26
1/15	21:00	23:00	26
1/16	21:00	23:00	26
1/17	21:00	23:00	26
1/18	21:00	23:00	26
1/19	21:00	23:00	26
1/20	21:00	23:00	26
1/21	21:00	23:00	26
1/22	21:00	23:00	26
1/23	21:00	23:00	26
1/24	21:00	23:00	26
1/25	21:00	23:00	26
1/26	21:00	23:00	26
1/27	21:00	23:00	26
1/28	21:00	23:00	26
1/29	21:00	23:00	26
1/30	21:00	23:00	26
1/31	21:00	23:00	26
1/1	21:00	23:00	26
1/2	21:00	23:00	26
1/3	21:00	23:00	26
1/4	21:00	23:00	26
1/5	21:00	23:00	26
1/6	21:00	23:00	26
1/7	21:00	23:00	26
1/8	21:00	23:00	26
1/9	21:00	23:00	26
1/10	21:00	23:00	26
1/11	21:00	23:00	26
1/12	21:00	23:00	26
1/13	21:00	23:00	26
1/14	21:00	23:00	26
1/15	21:00	23:00	26
1/16	21:00	23:00	26
1/17	21:00	23:00	26
1/18	21:00	23:00	26
1/19	21:00	23:00	26
1/20	21:00	23:00	26
1/21	21:00	23:00	26
1/22	21:00	23:00	26
1/23	21:00	23:00	26
1/24	21:00	23:00	26
1/25	21:00	23:00	26
1/26	21:00	23:00	26
1/27	21:00	23:00	26
1/28	21:00	23:00	26
1/29	21:00	23:00	26
1/30	21:00	23:00	26
1/31	21:00	23:00	26
1/1	21:00	23:00	26
1/2	21:00	23:00	26
1/3	21:00	23:00	26
1/4	21:00	23:00	26
1/5	21:00	23:00	26
1/6	21:00	23:00	26
1/7	21:00	23:00	26
1/8	21:00	23:00	26
1/9	21:00	23:00	26
1/10	21:0		

Timer Recording



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- 3** Press Δ + or ∇ - to set the month and date to 1/10 WED.
The day of the week is automatically set.



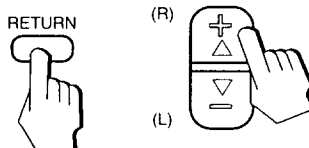
TIMER SET/CHECK			1/6	SAT
DATE	START	STOP	CH	
1/10WED	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
Use Δ (RETURN) Exit (MENU)				

- 4** Press RETURN to change the hours section under "START" in red then Δ + or ∇ - until 9 PM appears.



TIMER SET/CHECK			1/6	SAT
DATE	START	STOP	CH	
1/10WED	9:-PM	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
Use Δ (RETURN) Exit (MENU)				

- 5** Press RETURN to change the minute section under "START" in red then Δ + or ∇ - until 00 appears.



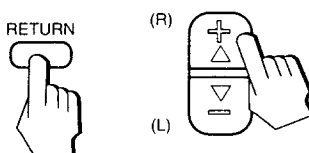
TIMER SET/CHECK			1/6	SAT
DATE	START	STOP	CH	
1/10WED	9:00PM	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
Use Δ (RETURN) Exit (MENU)				

- 6** Press RETURN.
The hours section under "STOP" changes in red. Set the turn-off time referring to steps 4 and 5.



TIMER SET/CHECK			1/6	SAT
DATE	START	STOP	CH	
1/10WED	9:00PM	10:55PM	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
Use Δ (RETURN) Exit (MENU)				

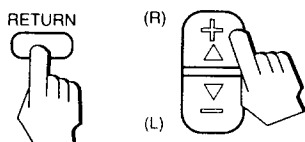
- 7** Press RETURN to change the CH position in red then Δ + or ∇ - until 26 appears.



TIMER SET/CHECK			1/6	SAT
DATE	START	STOP	CH	
1/10WED	9:00PM	10:55PM	26	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
-/-	-:-	-:-	-:-	-:-
Use Δ (RETURN) Exit (MENU)				



- 8** Press RETURN to change the recording speed position in red then Δ + or ∇ - until EP appears.



Note

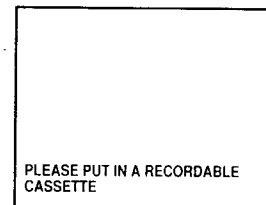
The AT (AUTO SPEED) mode starts recording at the SP speed, but if it determines there isn't enough tape left to complete the programmed recording, it switches to the EP speed.

TIMER SET/CHECK				1/6 SAT
DATE	START	STOP	CH	
1/10WED	9:00PM	10:55PM	26EP	
-/-	-:-	-:-	-:-	
-/-	-:-	-:-	-:-	
-/-	-:-	-:-	-:-	
-/-	-:-	-:-	-:-	
-/-	-:-	-:-	-:-	
Use Δ RETURN Exit MENU				

Notes

The following messages under each case appear on the screen:

- "PLEASE PUT IN A RECORDABLE CASSETTE" ---



When switched to stand-by mode for timer recording, if a cassette is not inserted or a cassette without safety tab is inserted.

- "PLEASE PUSH POWER OFF TO SET TIMER" ---

When the VIDEO TV is still turned on before the timer recording starts or when SLEEP OFF time and TIMER REC START overlap.

- "PLEASE STOP THE TAPE" ---

When TIMER ON SCREEN is pressed at the same time the tape is being played back.

- "VCR IS RECORDING" ---

When PLAY, FAST FORWARD, REWIND /REVIEW, EJECT, CH +/-, 0~9 buttons, INPUT SELECT, JUMP or MENU is pressed at the same time the timer recording is being done.

- "TIMER REC STARTS IN 5 MINUTES" ---
5 minutes before timer recording starts.

- "PLEASE SET THE CLOCK FIRST" ---

When TIMER ON SCREEN is pressed in the condition the current time is not set.

- "VCR is TIMER RECORDING" ---

When STOP button is pressed during recording.
The recording is not stopped.

- To stop the Timer Recording
 1. Press TIMER ON SCREEN
TIMER SET/CHECK screen appears.
 2. Press Δ + or ∇ - to select TIMER REC PROGRAM.
 3. Press CLEAR
The program is cleared and the timer recording stops.

- 9** Press RETURN to store the setting.



TIMER SET/CHECK				1/6 SAT
DATE	START	STOP	CH	
▶ 1/10WED	9:00PM	10:55PM	26EP	
-/-	-:-	-:-	-:-	
-/-	-:-	-:-	-:-	
-/-	-:-	-:-	-:-	
-/-	-:-	-:-	-:-	
Use Δ RETURN Exit MENU				

- 10** After you finish programming, press POWER to turn off the VIDEO TV.
The **TIMER REC** indicator lights.

To change or correct the setting before completing it

Press BACK SPACE to return to the item to be changed.

To preset another program

Move the cursor to the second line after step 9 and repeat steps 2 to 10.

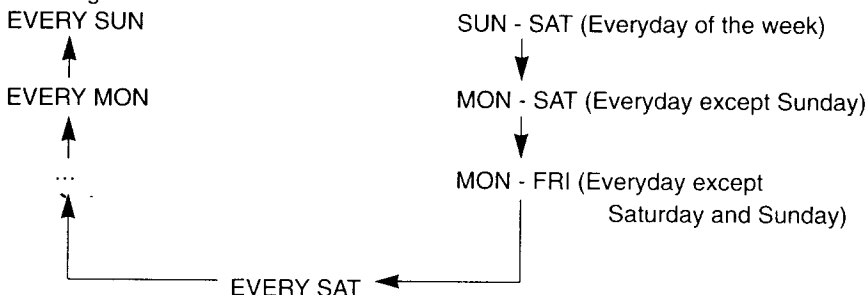
Daily/Weekly Recording

You can preset the timer-activated recording to the same program everyday of the week (Daily recording), or one day of the week (Weekly recording).

Follow steps 1 through 2 in "Setting the Timer" on page 47.

You can select the following programs.

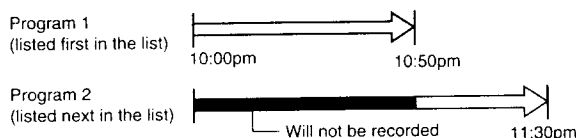
Each time you press ∇ -, the indication under "DATE" on screen changes in the following order.



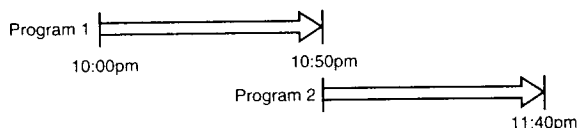
When Preset Timer Recordings Overlap

If the turn-on time of two programs are the same

The program listed first on the TIMER SET/CHECK display has priority over the other programs. The timer recording of lower priority programs will be done from the point after program 1 is finished.

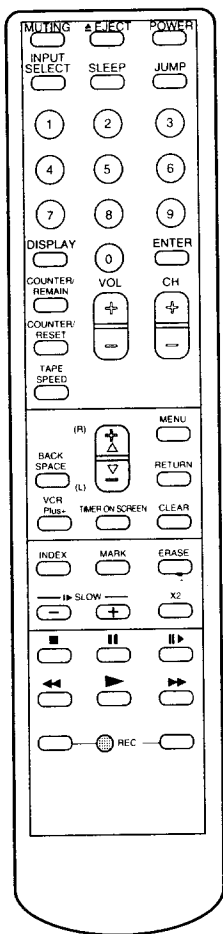
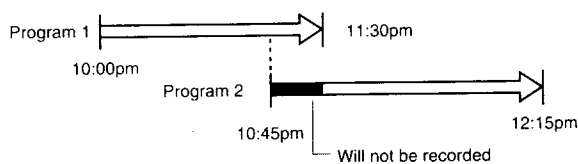


If the recording start time of program 2 is the same as the recording end time of program 1



If the recording start time of program 2 comes before recording of program 1 is over

The recording of program 2 will begin after program 1 is finished.



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Note

If a power interruption occurs

- If a power interruption lasting less than approximately three hours occurs while the VCR is waiting for the preset time, the VIDEO TV re-enter the timer recording standby mode.
- If a power interruption lasting more than approximately three hours occurs before a timer recording, the memory clears. Reset the date and time for timer recording.
- If a power interruption lasting less than approximately three hours occurs during a timer recording, the VIDEO TV starts recording again.

If the recording start time of the program is same as the time set with ON/OFF TIMER (pp.30-32)

- The ON/OFF TIMER has priority over the timer recording so that the timer recording will not start. In this case, set the recording start time earlier than ON/OFF TIMER and the timer recording will start.

Checking the Timer Settings

You can display all of the timer settings on the VIDEO TV screen to check the settings.

- 1 Press **TIMER ON SCREEN**.
The **TIMER SET/CHECK** screen appears.

TIMER ON SCREEN



DATE	START	STOP	CH
1/10WED	9:00PM	10:55PM	26EP
1/11THU	1:00PM	2:15PM	10AT
1/12FRI	1:00PM	2:15PM	10SP
MON-FRI	11:00AM	2:15PM	11SP
SUN-SAT	11:00AM	2:15PM	25AT
EVERY-SAT	11:00AM	2:15PM	25AT

Use \blacktriangleleft **RETURN** Exit **MENU**

- 2 Press **TIMER ON SCREEN** again to return to the original screen.

Notes

The **TIMER SET/CHECK** display

- When a recording is set for only one day, that setting is erased from the **TIMER SET/CHECK** display after the recording is over.
- The timer recording programs by using **VCR Plus+** is also displayed in the **TIMER SET/CHECK** on-screen menu.

Changing or Cancelling the Timer Settings

The timer settings can be changed or cancelled by referring to the **TIMER SET/CHECK** display.

- 1 Press **TIMER ON SCREEN**.
TIMER SET/CHECK screen appears.

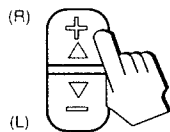
TIMER ON SCREEN



DATE	START	STOP	CH
1/10WED	9:00PM	10:55PM	26EP
1/11THU	1:00PM	2:15PM	10AT
1/12FRI	1:00PM	2:15PM	10SP
MON-FRI	11:00AM	2:15PM	11SP
SUN-SAT	11:00AM	2:15PM	25AT
EVERY-SAT	11:00AM	2:15PM	25AT

Use \blacktriangleleft **RETURN** Exit **MENU**

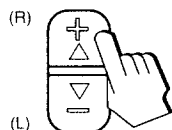
- 2 Press \blacktriangleup or \blacktriangledown to move the cursor to the program you wish to change or cancel.



DATE	START	STOP	CH
1/10WED	9:00PM	10:55PM	26EP
1/11THU	1:00PM	2:15PM	10AT
1/12FRI	1:00PM	2:15PM	10SP
MON-FRI	11:00AM	2:15PM	11SP
SUN-SAT	11:00AM	2:15PM	25AT
EVERY-SAT	11:00AM	2:15PM	25AT

Use \blacktriangleleft **RETURN** Exit **MENU**

- 3 To change it, flash the item to be changed by pressing **BACK SPACE** and make the required changes by pressing \blacktriangleup or \blacktriangledown .



- To cancel it, move the cursor to the item to be cancelled by pressing \blacktriangleup or \blacktriangledown then press **CLEAR**.

- 4 Press **TIMER ON SCREEN** to return to the original screen.

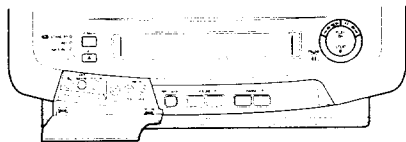
Notes

To stop recording after the timer recording has started

1. Press **POWER** to ON.
2. Press **TIMER ON SCREEN**.
3. Press \blacktriangleup or \blacktriangledown to move the cursor to the program under recording.
4. Press **CLEAR**.
Recording stops.
5. Press **TIMER ON SCREEN** to return to the original screen.

Quick Timer Recording

This function is convenient when, for example, you want to set the VCR to start recording immediately without going through the whole timer setting procedure.



Notes

- Make sure that the clock is set correctly before you activate Quick Timer Recording.
- During Quick Timer Recording, you cannot change the channel on the VIDEO TV.

Notes

- To extend the Quick Timer Recording time, press QUICK TIMER REC. to advance the recording time in 30-minute increments.
- To clear the Quick Timer Recording setting, press QUICK TIMER REC until time length is 0:00
- If the tape runs out during Quick Timer Recording, recording will stop and the power goes off. The tape will not rewind automatically.
- If a power interruption occurs during Quick Timer Recording, recording will stop and the power goes off. If the power interruption lasts less than three hours and the power is restored before the recording end time, recording will start again from that point.

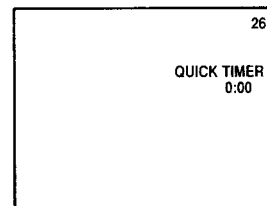
1 Insert a cassette. The VIDEO TV automatically turns on.

2 Press INPUT SELECT so that a channel number appears.
Press TAPE SPEED to select the recording speed, SP or EP.

3 Select the desired channel number with the 0-9 buttons or CHANNEL +/-.
If you try to select the Cable TV channel, first set CABLE to ON in SET UP menu.

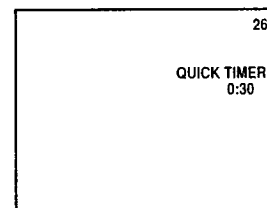
4 Press QUICK TIMER REC on the front panel.

QUICK
TIMER REC



5 Each time you press QUICK TIMER REC, the time length advances in 30-minute increments up to 8 hours.

QUICK
TIMER REC



After you select the desired time length, Quick Timer Recording starts from that point.

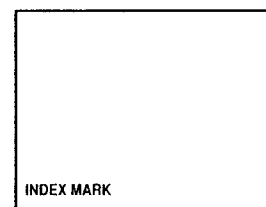


INDEX signal marks on the tape let you scan through the start of different programs or search for a specific section of tape.

Marking INDEX Signals

Automatic INDEX mark

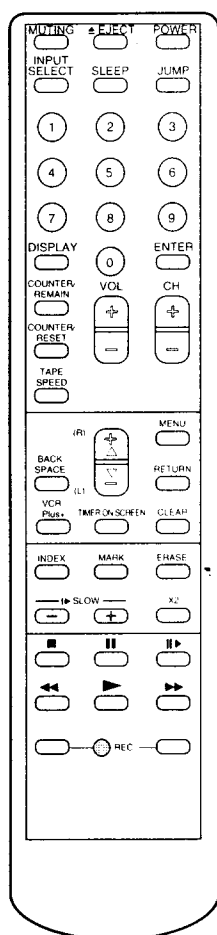
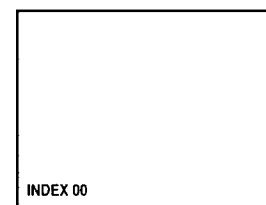
An INDEX signal is automatically marked at the beginning of recording.



Manual INDEX mark

INDEX signals can be marked at any desired point during any recording or normal playback.

Press INDEX once.
INDEX 00 appears.



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Then press MARK at the point where you want to mark INDEX signal. INDEX MARK appears on the screen.



Notes

- Leave an interval of more than 2 minutes between INDEX signals when marking them one after the other so that the VCR can detect them correctly.
- While an INDEX signal is being marked during playback, the recorded sound will not be heard, but it will not be erased.
- You cannot mark an INDEX signal in the following cases:
 - On a tape without safety tab.
 - On an unrecorded portion of a tape.
 - Immediately before a point on the tape where the tape speed changes.

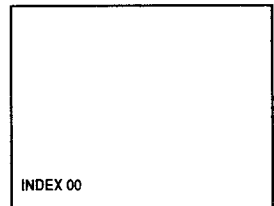
Index Function

Playing Back From the INDEX Point

The beginning of each program can be found and played back by using the INDEX signals.

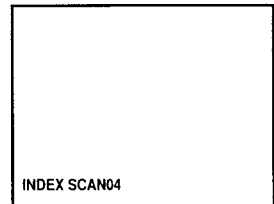
1 Insert a cassette with INDEX signals.

2 Press INDEX once during playback.
INDEX 00 appears on the screen.

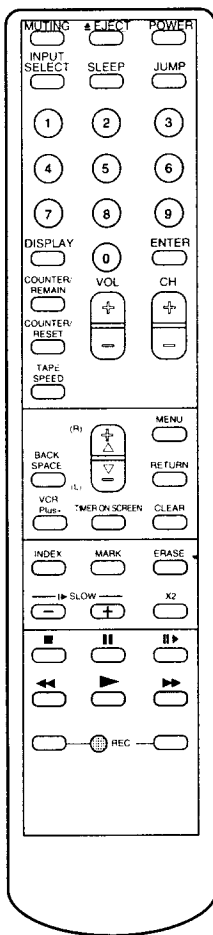


3 Press either FAST FORWARD ►► or REWIND/REVIEW ◀◀ to start the INDEX scan. The tape rewinds or rapidly advances to the next marked signal.

The tape plays back for about 5 seconds, then rewinds or rapidly advances to the next INDEX signal. Each time INDEX signal is detected and playback begins, the INDEX scan number (INDEX SCAN 04) appears.



4 When the desired program is detected, press PLAY ►.
Playback starts from that point.



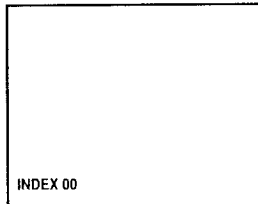
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Locating the Desired Program (INDEX Search)

A particular program can be located and played back by designating how many INDEX signals ahead or behind that program is from the current position.

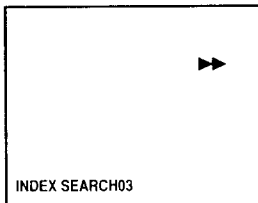
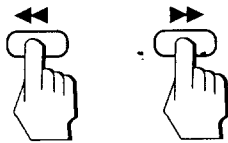
1 Insert a cassette with INDEX signals.

2 Press INDEX.
INDEX 00 appears.



3 Using the 0-9 buttons, enter the number of INDEX signals you want to skip.
For example, if the tape is at INDEX 02 and you want to locate INDEX 05, press 0 3.
You can select maximum location by INDEX 99.

4 Press either FAST FORWARD ►► or REWIND /REVIEW ◀◀.
INDEX SEARCH03 appears on the screen. When the desired signal is found, playback begins automatically.

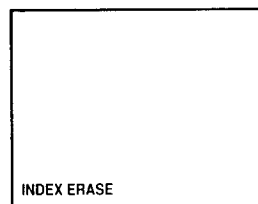


Erasing INDEX Signals

You can erase unnecessary INDEX signals.

1 Press INDEX during STOP mode.
INDEX 00 appears.

2 Press ERASE.
INDEX ERASE appears on the screen.



3 Press either FAST FORWARD ►► or REWIND/REVIEW ◀◀.
The first subsequent INDEX signal is erased and the tape begins playback.

Note

While INDEX signal is being erased, the recorded sound is temporarily muted.

Specification

Television system	American TV standard	Power consumption	KV-13VM30/31: 86W KV-20VM30: 108W
Recording system	Rotary four-head helical scan system	Dimensions (WHD)	KV-13VM30/31: 15" X 16" X 15 ^{1/5} " 382 X 407 X 411mm KV-20VM30: 20 ^{1/2} " X 20 ^{1/2} " X 18 ^{3/5} " 522 X 522 X 474mm
Channel coverage	VHF: 2 - 13 UHF: 14-69 Cable TV: 1-125	Weight	KV-13VM30/31: Net: 13.76 kg(30.3 lbs) Gross: 15.62 kg(34.4 lbs) KV-20VM30: Net: 26.1kg(58lbs) Gross: 30kg(66.1lbs)
Picture tube	KV-13VM30/31: Microblack™ Trinitron® tube 13-inch picture measured diagonally 14-inch picture tube measured diagonally KV-20VM30: Trinitron® Tube 20-inch picture measured diagonally 21-inch picture tube measured diagonally	Tape Speed	SP: 33.35 mm/sec. EP: 11.12 mm/sec.
Antenna	75-ohm external antenna terminal for VHF/UHF	Maximum recording/playback time	8 hours in EP mode
LINE IN	VIDEO IN (phono jack) 2 each (Front/Rear) Input signal: 1 Vp-p, 75 ohms, unbalanced, sync negative AUDIO IN (phono jack) 2 each (Front/Rear) Input level: 400 mVrms Input impedance: 47 kilohms	Fast-forward and rewind time	Approx. 4 min. 30 sec. (T-120 tape)
Power requirements	120V AC, 60 Hz	Supplied accessories	Remote commander RM-Y138:KV-20VM30 KV-13VM30 RM-Y138W:KV-13VM31 1 size AA (R6) battery (1) Antenna Adapter (1)

Note

Design and specifications are subject to change without notice.



If you have a problem with the VIDEO TV, first check the power cord connection, then go through the following list. Should the difficulty persist, unplug the unit, and contact your Sony dealer or local authorised Sony service facility.

VIDEO TV RECEPTION

Symptoms	Suggestions
No picture or sound	<ul style="list-style-type: none">• Make sure the unit is plugged into a working AC outlet.• Make sure it is not set to LINE IN mode.• Check that POWER is set to ON.• Check the antenna wires, connections and direction.
Picture OK, sound poor	<ul style="list-style-type: none">• Adjust the sound.
Sound OK, no picture	<ul style="list-style-type: none">• Try another channel.• Adjust the picture.
Picture weak or blurred	<ul style="list-style-type: none">• Check the antenna wires, connections and direction.• Adjust picture control.
Picture rolls vertically	<ul style="list-style-type: none">• Check the antenna wires, connections and direction.
Ghosts (multiple images)	<ul style="list-style-type: none">• Check the antenna wires, connections and direction.• Install a directional antenna.
Wrong color or no color	<ul style="list-style-type: none">• Adjust color and hue controls.
No response to button pressing	<ul style="list-style-type: none">• Press the buttons carefully again. Unplug the set, then plug it in and try again.
No response to remote control	<ul style="list-style-type: none">• Check the polarity (+ and –) of the batteries.• Replace the batteries.

Troubleshooting

VCR OPERATION

Symptoms	Suggestions
Cannot load video cassettes	<ul style="list-style-type: none">• Insert the cassette with the window side up and the safety tab facing you.• Check if a video tape is already in the VCR.
No operation when buttons are pressed	<ul style="list-style-type: none">• Cancel the Quick Timer Recording.
Auto play function doesn't work or TV programs can't be recorded	<ul style="list-style-type: none">• Make sure that the receiving channel of the set is properly tuned.• Make sure that the safety tab on the video cassette tape is still intact.• Check antenna wires, connections and direction.
Timer recording can't be performed	<ul style="list-style-type: none">• Make sure the recording start/stop time is correct.• Reconnect the power plug to an AC outlet, and reset the program recordings.
There is no picture in playback, or the playback picture is noisy or contains streaks	<ul style="list-style-type: none">• Check that power is set to ON.• Check that the video cassette tape has a recorded program.• Check the tracking control (for noise streaks)
Video cassette tape was inserted incorrectly	<ul style="list-style-type: none">• Wait a few seconds. The video cassette tape should eject itself.